AUTOMOTIVE INDUSTRIES
The AUTOMOBILE

Reg. U. S. Pat. Off.
Published Weekly

Volume 78 Number 9

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ANNUAL STATISTICAL ISSUE

CONTENTS

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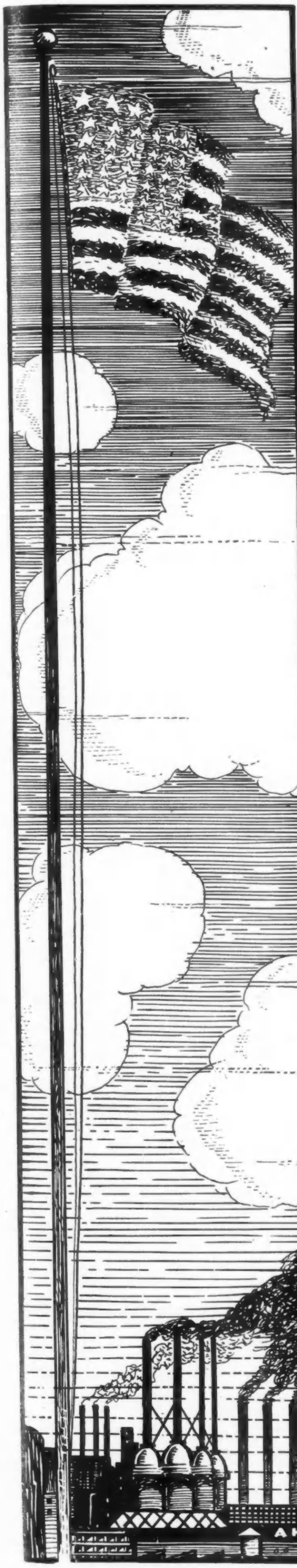


AUTOMOTIVE INDUSTRIES

Published Weekly
Founded 1895

February 26, 1938
Vol. 78, No. 9

HERBERT HOSKING, *Editor*

MARCUS AINSWORTH, *Statistician*

Statistical Summary of 1937

Total Registrations (U.S.)	**29,654,847★**
Passenger Cars	**25,460,397★**
Trucks and Buses	**4,194,450★**
Production (U.S. and Canada)	**5,016,515**
Passenger Cars	**4,068,494**
Trucks	**948,021★**
New Registrations (Sales to Consumers)	**4,098,393**
Passenger Cars	**3,480,253**
Trucks	**618,140★**
Car and Truck Dealers in U. S.	**46,224**
Exports (Value)	**$243,528,142**
Passenger Cars	**140,638,203**
Trucks and Buses	**102,889,939**
Wholesale Value Production	**$2,825,626,205**
Passenger Cars	**2,280,390,887**
Trucks	**545,235,318**
Retail Value New Cars Sold	**$2,799,100,000**
Gasoline Taxes (Federal and State)	**$953,583,721★**
Registration Fees (State)	**$371,467,951★**

★New Record

To the statisticians of the passenger car, stock engine and parts manufacturers, and all who have so willingly cooperated with us in supplying data for the various tabulations on the following pages, our sincere thanks and appreciation. Without their aid, we would not be able to give you this comprehensive picture of the industry.

Particular thanks for cooperation in supplying source material are due the motor vehicle commissions of the various states, the Aeronautical Chamber of Commerce of America and the following individuals:—

I. H. Taylor, Acting Chief, Automotive—Aeronautics Trade Division, Bureau of Foreign and Domestic Commerce; Oscar P. Pearson, manager, statistical department, Automobile Manufacturers Association; and George Quisenberry, editor, The American Automobile and El Automóvil Americano, export affiliates of AUTOMOTIVE INDUSTRIES.—M.A.

U. S. and World
Establish

World Motor Vehicle Registration by Years

	1931	1932	1933	1934	1935	1936	1937
Africa	370,880	369,814	383,227	425,573	466,603	562,892	607,374
America (less U.S.A.)	2,013,977	1,896,380	1,827,754	1,860,135	1,917,676	2,001,459	2,101,756
Asia	566,353	486,292	506,925	546,201	597,601	625,718	673,623
Europe	5,586,320	5,498,704	6,052,758	6,656,012	7,136,425	7,791,665	8,375,501
Oceania	772,287	740,016	778,856	826,711	890,669	972,059	1,033,813
Total	9,309,817	8,991,206	9,549,520	10,314,632	11,008,974	11,953,793	12,792,067
United States†	25,993,896	24,341,822	23,849,932	24,881,467	26,225,757	28,091,709	29,654,847
World Total	35,303,713	33,333,028	33,399,452	35,196,099	37,234,731	40,045,502	42,446,914

†AUTOMOTIVE INDUSTRIES, all others *The American Automobile* (Overseas Edition). See page 251 for chart.

U. S. Motor Vehicle Registrations by States

(As of December 31, 1937 and 1936)

STATE	Passenger Cars ‡		Trucks		Buses		Total Registered Motor Vehicles		Per Cent Change	Per Cent of Total		Persons per Motor† Vehicle
	1937	1936	1937	1936	1937	1936	1937	1936		1937	1936	1937
Alabama[1]	246,598	226,444	53,070	44,272	458	426	300,126	271,142	+10.8	1.01	.97	9.64
Arizona	105,869	94,473	22,973	20,183	368	a379	129,210	115,035	+12.2	.44	.41	3.14
Arkansas	174,277	169,652	59,263	50,131	348	b	233,888	219,783	+ 6.4	.79	.78	8.75
California[6]	2,319,341	2,178,038	164,132	148,991	c	c	2,483,473	2,327,029	+ 6.9	8.37	8.28	2.48
Colorado	304,400	284,121	32,795	31,930	1,043	b	338,238	316,051	+ 7.0	1.14	1.12	3.16
Connecticut	367,119	336,342	68,070	60,653	1,060	980	436,249	397,975	+ 9.6	1.47	1.42	3.99
Delaware	72,243	49,550	14,600	10,010	c	c	86,843	59,560	+45.8	.29	.21	3.01
Dist. of Columbia	165,550	162,922	16,692	18,397	1,423	....	183,665	181,319	+ 1.2	.62	.65	3.42
Florida	350,079	320,490	70,308	65,738	754	677	421,141	386,905	+ 8.9	1.42	1.38	3.96
Georgia	363,641	337,857	78,803	73,269	b	b	442,444	411,126	+ 7.8	1.49	1.46	6.97
Idaho	111,000	107,060	27,000	25,852	....	125	138,000	133,037	+ 3.9	.47	.47	3.57
Illinois	1,556,702	1,459,195	220,639	208,926	c	c	1,777,341	1,668,121	+ 6.7	5.99	5.94	4.43
Indiana	815,000	766,269	135,000	131,767	....	995	950.000	899,031	+ 5.9	3.20	3.20	3.65
Iowa	656,090	643,084	86,636	82,840	b	b	742,726	725,924	+ 2.1	2.50	2.58	3.43
Kansas	495,983	490,793	95,400	87,113	c	c	591,383	577,906	+ 2.2	1.99	2.06	3.15
Kentucky	342,000	320,736	58,000	51,840	....	....	400,000	372,576	+ 7.4	1.35	1.33	7.30
Louisiana	247,690	230,935	80,630	76,251	b	b	328,320	307,186	+ 7.0	1.11	1.09	6.49
Maine	157,620	150,809	41,600	39,276	135	152	199,355	190,237	+ 5.0	.67	.68	4.29
Maryland[7]	331,509	323,115	52,014	53,398	....	949	383,523	377,462	+ 1.8	1.29	1.34	4.37
Massachusetts[2]	737,998	708,966	104,316	102,400	4,927	4,814	847,241	816,180	+ 3.9	2.86	2.90	5.22
Michigan	1,362,769	1,234,692	146,117	138,984	c	c	1,508,886	1,373,676	+10.0	5.10	4.89	3.20
Minnesota	704,155	668,915	117,632	114,448	282	264	822,069	783,627	+ 5.0	2.77	2.79	3.23
Mississippi	171,507	159,051	53,072	43,357	b	a1,048	224,579	203,456	+10.8	.76	.72	9.00
Missouri	701,438	681,190	134,457	128,425	c	c	835.895	809,615	+ 3.4	2.82	2.88	4.77
Montana	133,811	127,839	40,081	39,311	c	c	173,892	167,150	+ 4.0	.59	.60	3.09
Nebraska	351,184	353,435	63,367	62,140	190	302	414,741	415.877	— 0.4	1.40	1.48	3.28
Nevada	32.563	30,829	8,092	7,680	c	c	40,655	38,509	+ 5.3	.14	.14	2.48
New Hampshire	100,510	97,261	23,768	22,023	....	977	124.278	120,261	+ 3.2	.42	.43	4.10
New Jersey	854,667	807,552	134,458	130,642	5,372	5,218	994,497	943,412	+ 5.3	3.35	3.36	4.36
New Mexico	90,583	85,648	31,117	22,731	b	b	121,700	108,379	+12.2	.41	.39	3.47
New York	2,200,000	2,116,522	362,000	326,404	a40,000	a35,093	2,602.000	2,478,019	+ 5.0	8.77	8.82	4.98
North Carolina	446,454	434,779	73,383	69,738	696	....	520,533	504,517	+ 3.8	1.76	1.80	6.70
North Dakota	141,018	137,523	32,084	29,650	96	68	173,198	167,241	+ 3.5	.58	.60	4.07
Ohio[3]	1,693,000	1,604,775	174,700	172,273	c	c	1,867,700	1,777,048	+ 5.0	6.30	6.33	3.60
Oklahoma	446,083	441,277	98,675	90,638	a2,505	b	547,263	531,915	+ 2.9	1.85	1.89	4.65
Oregon	298,971	277,437	60,660	49,746	718	693	360.349	327,876	+ 9.9	1.22	1.17	2.85
Pennsylvania	1,751,488	1,631,721	257,330	249,637	6,062	a5,868	2,014.880	1,887,226	+ 7.0	6.79	6.72	5.05
Rhode Island	148,633	140,393	19,768	19,458	438	482	168,839	160,333	+ 5.6	.57	.57	4.03
South Carolina[2]	239,793	217,690	39,835	33,525	b	....	279,628	251,215	+11.3	.94	.89	6.70
South Dakota	155,856	158,192	28,768	28,172	93	72	184,717	186,436	— 1.0	.62	.66	3.74
Tennessee[3]	328,187	321,106	55,777	49,368	b	b	383,964	370,474	+ 3.8	1.29	1.32	7.53
Texas	1,164,050	1,187,313	294,639	285,839	788	834	1,459,477	1,473,986	— 1.1	4.92	5.25	4.22
Utah	105,043	97,780	21,094	19,576	478	650	126.615	118,006	+ 7.2	.43	.42	4.09
Vermont	78,273	74,520	9,029	8,682	105	111	87,407	83,313	+ 5.0	.29	.30	4.38
Virginia[4]	363,997	345,503	67,547	57,689	641	595	432,185	403,787	+ 7.0	1.46	1.44	6.26
Washington[2]	448,931	419,877	84,450	79,500	738	699	534,119	500,076	+ 6.9	1.80	1.78	3.10
West Virginia	245,440	216,652	44,558	36,908	626	612	290,624	254,172	+14.2	.98	.90	6.41
Wisconsin	716,850	670,172	147,529	150,779	810	654	865,189	821,605	+ 5.2	2.92	2.92	3.38
Wyoming	64,434	61,325	17,368	15,592	b	b	81,802	76,917	+ 6.5	.28	.27	2.87
TOTAL	25,460,397	24,161,820	4,123,296	3,866,152	71,154	63,737	29,654,847	28,091,709	+ 6.0	100.00	100.00	4.36

1—For fiscal year ending Sept. 30th.
2—For fiscal year ending November 30th.
3—Totals for 9 months as fiscal year ends Mar. 31st.
4—From Mar. 15 to Dec. 31, 1936.
6—Passenger cars include approximately 118,000 light commercial vehicles.
7—1937 Registrations from April 1, 1937 to Dec. 31, 1937.

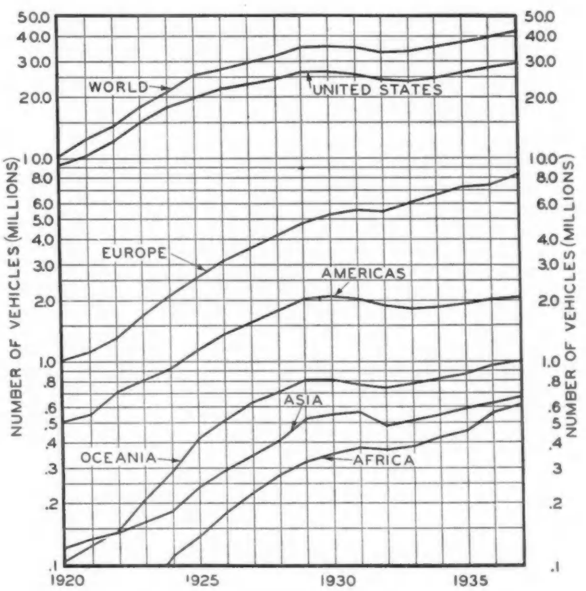
a—Includes taxicabs.
b—Included with passenger cars.
c—Included with trucks.
†—Based on Census Bureau estimated population as of July 1, 1937.
‡—Includes taxicabs.

Registrations New Record

U. S. Registrations 70 Per Cent of World

	Motor Vehicles	Cars*	Trucks*	Buses*	Motor-cycles*
Americas (less U. S. A.)	2,101,756	1,653,469	419,676	28,611	21,003
Africa	607,374	487,143	119,906‡	....	57,214
Asia	673,623	394,636	189,920	89,047	98,441
Europe	8,375,501	5,828,718	2,269,621	152,152	2,364,245
Oceania	1,033,813	745,496	287,717‡	....	101,945
World Total (less U. S. A.)	12,792,067	9,109,462	3,286,840	269,810	2,642,848
United States†	29,654,847	25,460,397	4,123,296	71,154	107,949
World Total 1937	42,446,914	34,569,859	7,410,136	340,964	2,750,797
World Total 1936	40,045,502	32,798,890	6,814,568	351,840	2,584,163

† Automotive Industries. All others The American Automobile (Overseas Edition).
* Not complete for all territories. ‡ Includes buses.



This chart shows the Registrations of Motor Vehicles by Continental Divisions of the World.

Motorcycle and Trailer Registrations

(As of Dec. 31, 1937)

State	Motorcycles 1937	Motorcycles 1936	Trailers and Semitrailers 1937	Trailers and Semitrailers 1936
Alabama	780	720	4,575	4,634
Arizona	423	345	4,321	3,302
Arkansas	508	417	13,134	10,253
California	11,240	9,832	132,927	112,088
Colorado	1,316	1,108	1,468	1,491
Connecticut	1,996	1,931	4,904	4,226
Delaware	268	242	3,923	2,227
District of Columbia	760	707	2,152	1,843
Florida	1,424	1,000	16,238	13,472
Georgia	1,085	1,002	12,262	11,903
Idaho	550	472	18,500	16,141
Illinois	6,490	5,201	23,475	18,168
Indiana	4,000	3,443	60,000	52,601
Iowa	2,291	2,074	6,887	4,911
Kansas	955	718	5,980	5,070
Kentucky	925	866	a	a
Louisiana	894	776	14,612	12,038
Maine	880	926	9,500	9,124
Maryland	1,509	1,453	3,411	3,224
Massachusetts	1,176	1,319	11,398	10,486
Michigan	4,080	3,233	134,148	119,771
Minnesota	2,074	1,894	30,233	26,567
Mississippi	234	200	2,016	1,294
Missouri	1,704	1,631	31,055	26,821
Montana	458	416	2,848	1,829
Nebraska	1,025	959	10,111	26,273
Nevada	113	115	1,262	1,060
New Hampshire	983	969	4,440	3,952
New Jersey	4,674	4,739	6,692	5,645
New Mexico	338	288	2,660	2,044
New York	10,300	10,171	37,800	30,251
North Carolina	1,449	1,296	40,129	35,857
North Dakota	262	251	816	517
Ohio	8,700	7,914	116,200	103,306
Oklahoma	1,133	1,049	26,471	6,960
Oregon	1,599	1,425	a	a
Pennsylvania	12,800	12,018	30,000	24,737
Rhode Island	829	672	593	372
South Carolina	897	740	3,674	3,320
South Dakota	419	409	19,122	19,349
Tennessee	1,422	1,348	a	a
Texas	3,278	3,544	42,376	41,660
Utah	437	414	958	1,066
Vermont	490	542	1,649	1,464
Virginia	1,828	1,761	6,498	6,359
Washington	2,049	1,775	15,718	12,122
West Virginia	1,161	1,144	384	2,721
Wisconsin	3,543	2,852	5,588	4,736
Wyoming	200	220	10,097	8,542
Total	107,949	98,541	933,205	815,081

a—Included with trucks.

U. S. Motor Vehicle Registrations by Years

	Passenger Cars	Trucks and Buses	Total Motor Vehicles	Per Cent Increase
1895	4	....	4	..
1896	16	....	16	..
1897	90	....	90	..
1898	800	....	800	..
1899	3,200	....	3,200	..
1900	8,000	....	8,000	..
1901	14,800	....	14,800	..
1902	23,000	....	23,000	..
1903	32,920	....	32,920	..
1904	54,590	410	55,000	..
1905	77,400	600	78,000	42
1906	105,900	1,100	107,000	37
1907	140,300	1,700	142,000	33
1908	194,400	3,100	197,500	39
1909	305,950	6,050	312,000	58
1910	458,500	10,000	468,500	50
1911	619,500	20,000	639,500	36
1912	902,600	41,400	944,000	48
1913	1,194,262	63,800	1,258,062	33
1914	1,625,739	85,600	1,711,339	36
1915	2,309,666	136,000	2,445,666	43
1916	3,297,996	215,000	3,512,996	44
1917	4,657,340	326,000	4,983,340	42
1918	5,621,617	525,000	6,146,617	23
1919	6,771,074	794,372	7,565,446	23
1920	8,225,859	1,006,082	9,231,941	22
1921	9,346,195	1,118,520	10,464,715	13
1922	10,864,128	1,375,725	12,239,853	17
1923	13,479,608	1,612,569	15,092,177	23
1924	15,460,649	2,134,724	17,595,373	17
1925	17,496,420	2,440,854	19,937,274	13
1926	19,237,171	2,764,222	22,001,393	10
1927	20,219,224	2,914,019	23,133,243	5
1928	21,379,125	3,113,999	24,493,124	6
1929	23,121,589	3,379,854	26,501,443	8
1930*	23,183,241	3,473,831	26,657,072	0.2
1931*	22,567,381	3,426,515	25,993,896	−2.5
1932*	21,139,092	3,202,730	24,341,822	−6.4
1933*	20,557,493	3,292,439	23,849,932	−2.0
1934*	21,535,199	3,346,268	24,881,467	4.3
1935*	22,630,715	3,595,042	26,225,757	5.2
1936*	24,161,820	3,929,889	28,091,709	7.2
1937*	25,460,397	4,194,450	29,654,847	6.0

*Automotive Industries count, all others Bureau of Public Roads.

World Registrations by Continental Divisions and Countries

By Special Arrangement with El Automóvil Americano and the American Automobile (Overseas Edition)

THE AMERICAS

COUNTRY	Motor Vehicles	Cars	Trucks	Buses	Motor-Cycles
Alaska	3,447	2,259	1,164	24	28
Antigua	375	312	50	13	27
Argentina	267,707	202,444	55,763	9,500	....
Bahamas	1,680	1,480	200	....	50
Barbados	2,382	1,950	432	....	95
Bermuda	55	2	47	6	....
Bolivia	4,000	1,000	3,000	....	....
Brazil	146,830	93,030	53,800	....	2,710
British Guiana	1,824	1,411	266	147	216
British Honduras	246	134	112	....	2
Canada	1,306,385	1,104,304	199,843	2,238	11,140
Chile	39,800	28,100	10,200	1,500	700
Colombia	22,055	13,286	6,410	2,359	245
Costa Rica	2,943	2,100	625	218	100
Cuba	41,207	24,914	13,400	2,893	144
Dominica	97	70	27	....	17
Dominican Republic	2,595	1,716	837	42	180
Dutch Guiana	200	140	50	10	50
Ecuador	4,310	1,915	1,669	726	78
French Guiana	215	120	85	10	10
Grenada	540	400	130	10	65
Guadeloupe	2,250	1,775	405	70	90
Guatemala	4,136	2,580	1,030	526	425
Haiti	2,650	1,968	682	....	43
Honduras	1,256	724	524	8	4
Jamaica	12,442	9,597	2,687	158	559
Martinique	2,975	2,320	555	100	120
Mexico	100,156	64,660	31,180	4,316	1,521
Neth. West Indies	3,325	1,925	900	500	160
Newfoundland	4,690	3,650	1,025	15	150
Nicaragua	826	589	195	42	61
Panama	12,152	10,781	713	658	61
Paraguay	1,945	925	655	365	....
Peru	20,682	12,371	7,132	1,179	339
Puerto Rico	20,967	16,255	4,712	....	185
St. Lucia	223	177	22	24	22
St. Pierre-Miquelon	110	44	66	....	9
St. Vincent	241	184	28	29	27
Salvador	3,100	2,300	450	350	200
Trinidad and Tobago	7,250	4,500	2,200	550	1,020
United States	29,654,847	25,460,397	4,123,296	71,154	100,000
Uruguay	27,112	20,332	6,780	....	....
Venezuela	23,300	14,000	9,300	....	150
Virgin Islands	725	450	250	25	....
West Indies (Other)	350	275	75	....	....
Total 1937	31,756,603	*27,113,866	*4,542,972	*99,765	*121,003
†Total 1937	2,101,756	*1,653,469	*419,676	*28,611	*21,003
Total 1936 (Revised)	30,093,168	*25,745,261	*4,262,536	*89,212	*119,896
†Total 1936 (Revised)	2,001,459	*1,583,441	*396,384	*25,745	*19,576
Increase	1,663,435 or 5.9 per cent.				

† Not including United States. * Not complete for all territories.

EUROPE

COUNTRY	Motor Vehicles	Cars	Trucks	Buses	Motor-Cycles
Albania	908	390	405	113	35
Austria	47,371	30,140	15,071	2,160	63,941
Azores	894	753	47	94	127
Belgium	220,373	142,918	75,259	2,196	64,736
Bulgaria	4,214	2,585	1,103	526	1,550
Czechoslovakia	94,993	72,494	20,019	2,480	49,031
Danzig	3,299	2,400	845	54	2,000
Denmark	145,792	103,350	40,600	1,842	28,230
Estonia	5,285	2,767	2,252	266	2,035
Faroe Islands	110	27	58	25	7
France	2,200,000	1,650,000	550,000	....	....
Finland	44,399	24,846	16,897	2,656	6,045
Germany	1,445,743	1,108,433	320,016	17,294	1,327,189
Gibraltar	1,050	875	175	....	1,100
Great Britain	2,306,834	1,762,098	460,343	84,393	462,439
Greece	13,900	6,600	5,300	2,000	700
Holland	147,805	93,545	50,407	3,853	55,784
Hungary	21,150	16,300	4,260	590	9,850
Iceland	2,000	850	1,150	....	150
Irish Free State	60,533	48,805	10,915	813	3,107
Italy	429,700	312,000	107,000	10,700	180,000
Latvia	6,850	3,500	3,000	350	2,500
Lithuania	2,730	1,790	570	370	1,380
Malta	4,739	3,010	867	862	461
Monaco	1,850	1,450	400		150
Northern Ireland	43,985	33,332	9,164	1,489	3,010
Norway	76,400	45,371	27,152	3,877	9,773
Poland	34,325	24,495	8,076	1,754	9,876
Portugal	45,930	34,000	10,250	1,680	4,300
Rumania	26,500	19,500	4,000	3,000	1,300
Spain	125,000	....	....	....	....
Sweden	192,700	135,500	52,800	4,400	44,400
Switzerland	89,067	69,098	18,454	1,515	28,639
U. S. S. R. (Russia)	514,440	65,096	449,344	....	....
Yugoslavia	14,632	10,400	3,432	800	400
Total 1937	8,375,501	*5,828,718	*2,269,631	*152,152	*2,364,245
Total 1936 (Revised)	7,791,665	*5,515,745	*1,990,066	*145,380	*2,214,651
Increase	583,836 or 7.7 per cent.				

* Not complete for all countries.

AFRICA

COUNTRY	Motor Vehicles	Cars	Trucks-Buses	Motor-cycles
Algeria	64,550	55,000	9,550	3,900
Angola	3,250	1,250	2,000	235
Basutoland	602	452	150	13
Bechuanaland	411	318	93	39
Belgian Congo	5,530	2,862	2,668	1,350
British East Africa	20,137	13,505	6,632	1,623
British Somaliland	270	50	220	5
British West Africa	16,552	5,809	10,743	796
Canary Islands	5,975	3,725	2,250	....
Egypt	32,891	28,024	4,867	2,857
French Equatorial Africa	1,265	527	738	225
French West Africa	14,487	5,792	8,695	1,220
French Somaliland	325			15
Liberia	170	60	110	6
Madeira	1,140	760	380	10
Madagascar	6,834	4,849	1,985	2,756
Mauritius	2,633	2,119	514	221
Morocco	58,437	44,291	14,146	5,538
Nyasaland	1,393	841	552	525
Portuguese East Africa	4,650	2,800	1,850	900
Rhodesia	21,400	16,500	4,900	1,800
Seychelles	80	70	10	....
South West Africa	3,950	2,750	1,200	125
Sudan	4,317	2,184	2,133	....
Swaziland	560	435	125	96
Tangier	784	631	153	39
Tripolitania	1,505	1,230	275	170
Tunisia	17,480	14,870	2,610	1,780
Union of South Africa	315,796	275,439	40,357	31,000
Total 1937	607,374	*487,143	*119,906	*57,214
Total 1936 (Revised)	562,892	*451,259	*111,318	*57,344
Increase	44,482 or 8.0 per cent.			

* Not complete for all territories.

ASIA

	Motor Vehicles	Cars	Trucks	Buses	Motor-cycles
Afghanistan	3,000	500	2,500	...	...
Arabia	2,725	1,690	980	55	23
British Malaya	42,200	31,500	10,700	...	4,500
Ceylon	27,035	20,224	4,161	2,650	3,008
China	44,750	23,750	13,500	7,500	...
Chosen	9,500	2,600	3,900	3,000	1,800
Cyprus	394	168	226	...	85
French Indo China	17,151	13,263	1,941	1,947	1,456
Hongkong	4,665	3,611	1,054	...	285
India	173,243	122,438	22,883	27,922	12,593
Iran	12,550	3,900	8,300	350	250
Iraq	7,600	5,100	2,500	...	168
Japanese Empire	166,000	61,500	70,200	34,300	57,000
Macao	407	229	103	77	...
Manchukuo	8,950	4,350	4,600	...	800
Netherland East Indies	67,994	47,846	11,568	8,580	12,715
Palestine	7,715	4,700	2,120	895	1,100
Philippine Islands	47,440	30,007	17,433	...	508
Siam	10,000	5,400	4,100	500	410
Syria	10,380	8,153	1,718	509	733
Trans-Jordan	438	284	116	38	7
Turkey	9,484	3,443	5,317	724	1,000
Total, 1937	673,623	*394,656	*189,920	*89,047	*98,441
Total, 1936 (Revised)	625,718	*381,172	*184,642	*59,904	*92,295
Increase	47,905 or 8 per cent				

*Not complete for all territories

OCEANIA

	Motor Vehicles	Cars	Trucks and Buses	Motor-cycles
Australia	732,320	506,320	226,000	80,000
Cook Islands	85	44	41	5
Fiji Islands	1,747	1,050	697	107
French Oceania	600	425	175	25
Hawaii	57,915	46,715	11,200	597
New Guinea	602	373	229	36
New Zealand	239,657	190,452	49,205	21,175
Other Oceania	600	...	...	...
Samoa	287	117	170	...
Total, 1937	1,033,813	*745,496	*287,717	*101,945
Total, 1936 (Revised)	972,059	*705,453	*266,006	*99,977
Increase	61,754 or 6 per cent			

*Not complete for all territories

Federal Taxes Levied on Automotive Utilities*

(As of December 31)

Source of Revenue	Amount Collected (1) 1933	1934	1935	1936	1937
Lubricating Oils	$22,289,625	$24,843,489	$28,818,919	$29,012,547	$33,681,590
Gasoline	181,125,988	170,109,269	172,262,483	186,321,448	203,025,380
Transportation of oil by pipe line	10,237,275	10,008,692	9,256,287	10,423,608	12,304,203
Crude petroleum processed, etc.	....	810,695	1,691,117	859,758	967,375
Automobile trucks	3,046,826	5,261,207	6,674,268	8,044,343	8,811,651
Automobiles and motorcycles	22,475,887	31,533,516	42,262,453	56,475,924	64,721,887
Auto parts and accessories	4,443,071	5,885,972	7,019,009	8,747,946	9,619,926
Tires	19,816,533	20,003,544	22,660,695	31,837,511	33,500,198
Inner tubes	4,019,586	4,700,534	5,441,753	6,404,043	6,587,806
Total (all automotive)	$267,454,791	$273,156,918	$296,086,984	$338,127,128	$373,220,015
Per cent of all revenue collections	....	9.8	11.0	8.9	6.7
State Taxes					
Gasoline (2)	$519,403,450	$566,642,000	$616,851,671	$686,631,000	$750,558,341
Registration fees (2)	301,932,039	312,929,000	322,481,415	350,752,000	371,467,951
Grand Total Federal and State Taxes (3)	$1,088,790,280	$1,152,727,918	$1,235,420,070	$1,375,510,128	$1,495,246,307
Average Federal and State tax per motor vehicle (3)	$45.60	$46.40	$47.20	$49.00	$50.50

(1) From monthly statements of Bureau of Internal Revenue.
(2) 1937 by AUTOMOTIVE INDUSTRIES, all others Bureau of Public Roads.
(3) Does not include Personal Property Taxes which for 1936 amounted to approximately $87,500,000.
* Compiled by National Highway Users Conference.

State Taxes Averaged $38 Per Motor Vehicle in 1937

STATE	State Tax per Gallon, Cents	State Gasoline Tax Receipts 1937	State Gasoline Tax Receipts 1936	Per Cent Increase	State Registration Fees 1937	State Registration Fees 1936	Per Cent Increase	Total State Tax Receipts from Gasoline and Registration Fees 1937	Total State Tax Receipts from Gasoline and Registration Fees 1936	State Taxes per Motor Vehicle 1937	State Taxes per Motor Vehicle 1936
Alabama	6	$13,205,674	$11,754,000	12.3	$4,500,000	$4,101,000	9.8	$17,705,674	$15,855,000	$58.99	$58.48
Arizona	5	4,318,478	3,841,000	12.3	859,456	1,028,000	−16.4	5,176,934	4,869,000	40.06	42.32
Arkansas	6½	9,890,449	9,155,000	8.0	3,214,330	2,829,000	13.5	13,104,779	11,984,000	56.03	54.52
California	3	46,895,502	42,996,000	9.1	13,086,970	12,056,000	8.0	59,982,472	55,052,000	24.13	23.65
Colorado	4	7,460,845	6,833,000	9.2	2,415,121	2,589,000	7.0	9,875,966	9,422,000	29.19	29.81
Connecticut	3	8,670,191	8,782,000	−1.1	6,527,145	5,957,000	9.6	15,197,336	14,739,000	34.83	37.03
Delaware	4	1,900,000	1,853,000	2.6	1,035,926	1,102,000	− 5.8	2,935,926	2,955,000	33.80	49.61
District of Columbia	2	2,719,323	2,382,000	14.1	529,795	963,000	−45.1	3,249,118	3,345,000	17.69	18.44
Florida	7	22,022,889	19,925,000	10.5	5,903,743	5,546,000	6.5	27,926,632	25,471,000	66.31	65.83
Georgia	6	19,303,433	17,493,000	10.2	1,400,062	1,302,000	7.5	20,703,495	18,795,000	46.79	45.71
Idaho	5	4,500,000	3,692,000	22.0	2,475,000	2,175,000	4.1	6,975,000	5,867,000	50.54	44.10
Illinois	3	35,837,928	33,458,000	7.1	20,861,021	19,410,000	7.2	56,698,949	52,868,000	31.90	31.69
Indiana	4	22,959,141	20,695,000	11.0	10,000,000	9,044,000	10.8	32,959,141	29,739,000	34.69	33.07
Iowa	3	13,167,152	12,196,000	8.0	11,917,714	10,793,000	10.8	25,084,866	22,989,000	33.77	31.66
Kansas	3	10,500,000	9,372,000	12.0	3,953,000	3,815,000	3.7	14,453,000	13,187,000	24.43	22.81
Kentucky	5	12,660,450	11,273,000	12.3	3,300,000	4,591,000	−28.0	15,960,450	15,864,000	39.90	42.57
Louisiana	7	15,925,241	12,121,000	31.8	4,655,983	4,112,000	3.2	20,581,224	16,233,000	62.68	52.84
Maine	4	5,549,732	5,202,000	6.8	3,700,000	3,582,000	3.3	9,249,732	8,784,000	46.39	46.17
Maryland	4	9,857,145	8,921,000	10.4	4,428,713	4,744,000	− 6.5	14,285,858	13,665,000	37.24	36.20
Massachusetts	3	20,776,337	18,448,000	12.5	6,945,602	6,795,000	2.1	27,721,939	25,243,000	32.72	30.92
Michigan	3	29,375,155	25,735,000	14.2	22,063,964	19,737,000	11.3	51,439,119	45,472,000	34.09	33.10
Minnesota	4	16,332,133	12,133,000	34.8	8,759,757	8,189,000	7.0	25,091,890	20,322,000	30.52	25.93
Mississippi	6	10,140,829	9,062,000	12.0	2,450,488	1,869,000	31.0	12,591,317	10,931,000	56.06	53.72
Missouri	2	12,000,000	11,072,000	8.5	9,407,684	8,988,000	4.8	21,407,684	20,060,000	25.61	24.77
Montana	5	4,591,167	4,455,000	3.0	1,800,000	1,730,000	4.0	6,391,167	6,185,000	36.75	37.00
Nebraska	5	10,873,648	11,218,000	−3.2	2,185,618	2,158,000	1.2	13,059,266	13,376,000	31.48	32.16
Nevada	4	1,182,691	1,080,000	9.6	294,648	279,000	5.8	1,477,339	1,359,000	36.33	35.29
New Hampshire	4	3,336,028	3,180,000	4.9	2,361,845	2,635,000	− 6.9	5,697,873	5,815,000	45.84	48.35
New Jersey	3	20,000,000	19,087,000	5.0	18,683,950	17,850,000	4.8	38,683,950	36,937,000	38.89	39.15
New Mexico	5	3,800,000	3,389,000	12.9	1,731,433	1,318,000	31.4	5,531,433	4,707,000	45.45	43.43
New York	4	61,851,455	55,634,000	11.1	48,500,000	46,291,000	5.0	110,351,455	101,925,000	42.41	41.13
North Carolina	6	22,428,464	19,994,000	12.0	9,128,126	7,589,000	20.3	31,556,590	27,583,000	60.62	54.67
North Dakota	3	2,873,278	2,245,000	27.9	1,492,132	1,456,000	2.7	4,365,410	3,701,000	25.20	22.12
Ohio	4	43,500,000	43,450,000	0.1	23,322,829	23,256,000	0.1	66,822,829	66,706,000	35.77	37.53
Oklahoma	4	13,762,432	13,211,000	4.0	4,647,434	4,743,000	− 2.0	18,409,866	17,954,000	33.63	33.75
Oregon	5	9,790,801	9,208,000	6.1	3,346,761	2,832,000	18.2	13,137,562	12,040,000	36.45	36.72
Pennsylvania	4	55,719,800	49,364,000	13.0	38,214,342	35,331,000	8.2	93,934,142	84,695,000	46.62	44.87
Rhode Island	3	2,400,000	2,226,000	8.0	2,789,784	2,596,000	7.2	5,189,784	4,822,000	30.73	30.07
South Carolina	6	10,785,089	9,495,000	13.4	1,572,167	1,876,000	−16.1	12,357,256	11,371,000	44.19	45.26
South Dakota	4	4,070,069	4,068,000	....	1,624,523	1,540,000	5.5	5,694,592	5,608,000	30.82	30.09
Tennessee	7	16,334,187	17,177,000	−4.9	4,055,318	3,706,000	9.5	20,389,505	20,883,000	53.10	56.37
Texas	4	41,497,192	38,467,000	7.9	18,878,777	17,725,000	6.4	60,375,969	56,192,000	41.36	38.12
Utah	4	3,422,710	3,087,000	10.8	974,416	976,000	− 0.2	4,397,126	4,063,000	34.72	34.43
Vermont	4	2,508,146	2,277,000	10.2	2,401,542	2,245,000	7.0	4,909,688	4,522,000	56.17	54.27
Virginia	5	16,122,471	14,703,000	9.8	6,021,910	5,737,000	5.0	22,144,381	20,440,000	51.23	50.62
Washington	5	14,500,000	14,336,000	1.2	3,975,870	2,980,000	33.1	18,475,870	17,316,000	34.59	34.62
West Virginia	5	7,253,003	6,803,000	6.8	5,392,279	5,832,000	− 7.5	12,645,282	12,635,000	43.51	49.71
Wisconsin	4	19,536,974	17,831,000	9.5	13,084,925	12,213,000	7.0	32,621,899	30,044,000	37.70	36.56
Wyoming	4	2,450,709	2,252,000	9.0	596,848	541,000	10.1	3,047,557	2,793,000	37.25	36.31
Total		$750,558,341	$686,631,000	9.2	$371,467,951	$350,752,000	5.9	$1,122,026,292	$1,037,383,000	*$37.83	*$36.92

* With Federal and other taxes this amounts to about $50.00 in 1937 and $49.00 in 1936.

World Production of Motor Vehicles

	1935*			1936*			1937**		
	Passenger Cars	Trucks & Buses	Total	Passenger Cars	Trucks & Buses	Total	Passenger Cars	Trucks & Buses	Total§
United States	3,252,244	694,690	3,946,934	3,669,528	784,587	4,454,115	3,915,863	893,652	4,809,515
Canada	135,562	37,315	172,877	128,369	33,790	162,159	152,631	54,369	207,000
Total	3,387,806	732,005	4,119,811	3,797,897	818,377	4,616,274	4,068,494	948,021	5,016,515
Austria	1,788	721	2,509	4,466	809	5,275	750	4,500	5,250
Belgium	463	290	753	60	474	534	......	......	500
Czechoslovakia	9,195	783	9,978	11,158	983	12,141	12,000	1,000	13,000
Denmark	......	148	148	......	250	250	......	......	250
France	156,010	23,260	179,270	178,354	23,383	201,737	180,000	20,000	200,000
Germany	201,438	41,496	242,934	240,292	57,220	297,512	260,000	50,000	310,000
Hungary	......	111	111	......	465	465	......	......	500
Italy	40,236	4,972	45,208	40,000	5,000	45,000	60,000	10,000	70,000
Japan	5,020	1,780	6,800	3,460	6,172	9,632	......	......	20,000
Poland	488	300	788	1,200	1,200	2,400	1,000	1,000	2,000
Soviet Russia	19,200	77,800	97,000	9,900	128,500	138,400	18,000	182,000	200,000
Spain	96	495	591	......	......	......	......	......	......
Sweden	790	2,614	3,404	875	3,576	4,451	......	......	4,500
Switzerland	......	460	460	6	290	296	......	......	......
United Kingdom†	325,194	91,721	416,915	367,142	114,305	481,447	389,633	118,116	507,749
Total (Foreign)	759,918	246,951	1,006,869	856,913	342,627	1,199,540	‡921,383	‡386,616	‡1,333,749
World Total	4,147,724	978,956	5,126,680	4,654,810	1,161,004	5,815,814	4,989,877	1,334,637	6,350,264

† For fiscal year ending Sept. 30 ‡ Not complete for all territories. ***The American Automobile* (Overseas Edition).
§ Miscellaneous total is 2,500. * Bureau of Foreign and Domestic Commerce—Automotive Division.

Wholesale Values of Production

(U. S. and Canada)

	Passenger Cars		Trucks		Cars and Trucks	
Year	Units*	Value	Units†	Value	Units	Value
1912	356,000	$335,000,000	22,000	$43,000,000	378,000	$378,000,000
1913	461,500	399,902,000	23,500	44,000,000	485,000	443,902,000
1914	543,679	413,859,000	25,375	45,098,464	569,054	458,957,843
1915	895,930	575,978,000	74,000	125,800,000	969,930	701,778,000
1916	1,525,578	921,378,000	92,130	161,000,000	1,617,708	1,082,378,000
1917	1,745,792	1,053,505,781	128,157	220,982,668	1,873,949	1,274,488,499
1918	943,436	801,937,925	227,250	434,168,992	1,170,686	1,236,106,917
1919	1,657,652	1,461,785,925	275,943	423,326,621	1,933,595	1,885,112,546
1920	1,905,560	1,809,170,963	321,789	423,249,410	2,227,349	2,232,420,373
1921	1,518,061	1,091,752,452	164,304	169,914,098	1,682,365	1,261,666,550
1922	2,369,089	1,561,740,645	277,140	231,282,063	2,646,229	1,793,022,708
1923	3,753,945	2,274,554,488	426,505	317,478,940	4,180,450	2,592,033,428
1924	3,303,646	2,040,706,519	434,140	326,706,496	3,737,786	2,367,413,015
1925	3,870,744	2,544,528,799	557,056	470,634,763	4,427,800	3,015,163,562
1926	3,948,843	2,746,064,722	556,818	468,752,769	4,505,661	3,214,817,491
1927	3,083,360	2,265,633,102	497,020	435,072,641	3,580,380	2,700,705,743
1928	4,012,158	2,703,753,500	588,983	459,045,380	4,601,141	3,162,798,880
1929	4,794,898	2,981,141,842	826,811	595,504,039	5,621,709	3,576,645,881
1930	2,910,187	1,720,652,104	599,991	405,949,915	3,510,178	2,126,602,019
1931	2,038,183	1,153,907,947	434,176	272,748,305	2,472,359	1,426,656,252
1932	1,186,209	650,781,297	245,285	142,264,003	1,431,494	793,045,300
1933	1,627,367	795,304,780	358,614	192,131,509	1,985,981	987,436,289
1934	2,270,566	1,204,376,351	599,397	332,913,985	2,869,963	1,537,290,336
1935	3,387,806	1,788,635,180	732,005	399,211,522	4,119,811	2,187,846,702
1936	3,797,897	2,092,460,475	818,377	481,961,420	4,616,274	2,574,421,895
1937	4,068,494	2,280,390,887	948,021	545,235,318	5,016,515	2,825,626,205

* Includes Taxicabs. † Includes Buses.

Foreign Production Up 11 Per Cent Over 1936

These figures do not include American cars assembled in European plants.

	Motor Vehicles
1924	334,500
1925	460,678
1926	529,343
1927	578,201
1928	589,900
1929	650,000
1930	583,107
1931	576,289
1932	545,469
1933	689,666
1934	865,878
1935	1,006,869
1936	1,199,540
1937*	1,333,749

* *The American Automobile* (Overseas Edition).
†Partly estimated.

Passenger Car Production

(U. S. and Canada)

Division by wholesale price classes

	Units					Per Cent of Total				
	1933	1934	1935	1936	1937*	1933	1934	1935	1936	1937*
Under $500	1,316,341	1,443,357	1,787,171	1,919,618	1,638,471	80.89	63.57	52.75	50.55	40.27
$501-$750	237,099	715,989	1,444,529	1,677,558	2,128,471	14.57	31.53	42.64	44.17	52.32
$751-$1,000	32,610	66,223	110,813	143,269	254,737	2.00	2.92	3.27	3.77	6.26
$1,001-$1,500	20,125	27,576	28,736	39,997	30,720	1.24	1.21	.85	1.05	.75
$1,501-$2,000	10,409	8,391	8,716	11,545	11,633	.64	.37	.26	.30	.29
$2,001-$3,000	8,725	6,879	5,413	4,326	4,052	.54	.31	.16	.11	.10
$3,001 and over	2,052	2,151	2,428	1,584	410	.12	.09	.07	.05	.01
Total	1,627,361	2,270,566	3,387,806	3,797,897	4,068,494	100.00	100.00	100.00	100.00	100.00

*Partly estimated.

GM Produced 40 Per Cent of All Passenger Cars in 1937

(U. S. and Canada)

	1932 Units	1932 % of Total	1933 Units	1933 % of Total	1934 Units	1934 % of Total	1935 Units	1935 % of Total	1936 Units	1936 % of Total	1937 Units	1937 % of Total
Chrysler Motors	211,670	17.8	409,970	25.2	528,230	23.3	767,060	22.6	953,620	25.1	1,016,880	25.0
Ford and Lincoln	345,735	29.2	377,966	23.2	623,271	27.5	989,642	29.2	858,506	22.6	938,509	23.1
General Motors Corporation	448,193	37.8	671,880	41.3	902,324	39.7	1,324,404	39.1	1,599,777	42.1	1,644,760	40.4
All Others	180,611	15.2	167,545	10.3	216,341	9.5	306,700	9.1	385,994	10.2	468,345	11.5
Total	1,186,209	100.0	1,627,361	100.0	2,270,566	100.0	3,387,806	100.0	3,797,897	100.0	4,068,494	100.0

Monthly Motor Vehicle Production

(U. S. and Canada)

Passenger Cars

	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	
January	209,902	212,244	364,773	242,672	142,869	101,915	112,754	117,700	235,806	308,589	324,334	January
February	277,376	301,320	431,755	293,036	187,948	98,604	93,153	193,875	287,142	234,872	310,809	February
March	363,595	386,510	546,489	348,087	241,727	106,003	103,396	291,546	377,374	357,068	423,006	March
April	377,713	384,778	571,956	393,804	300,960	126,597	156,712	303,806	407,721	436,576	452,907	April
May	378,921	404,444	541,310	382,619	282,096	165,025	188,675	290,268	322,485	401,139	443,412	May
June	296,035	381,026	469,260	298,130	215,979	166,646	213,602	272,090	306,300	388,183	429,313	June
July	246,530	357,682	439,598	230,761	187,324	101,478	196,587	231,501	283,715	379,823	372,916	July
August	285,724	422,996	452,857	190,864	158,851	79,073	196,333	190,825	186,133	212,140	317,270	August
September	235,124	374,276	375,046	182,049	111,336	66,489	161,734	129,251	59,499	92,324	120,597	September
October	189,278	351,899	328,305	117,014	59,176	37,468	107,593	86,128	220,113	194,690	306,040	October
November	114,885	223,896	176,629	104,668	49,996	49,201	43,868	50,072	347,830	351,171	309,121	November
December	108,277	211,087	96,920	126,483	99,921	87,710	52,954	113,504	353,688	441,322	258,769	December
Total	3,083,360	4,012,158	4,794,898	2,910,187	2,038,183	1,186,209	1,627,361	2,270,566	3,387,806	3,797,897	4,068,494	Total

Motor Trucks

	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	
January	44,382	27,947	57,765	40,938	35,475	21,160	19,429	44,870	64,529	68,655	75,300	January
February	46,014	34,980	65,950	52,925	41,863	24,291	15,592	44,952	63,204	65,938	72,889	February
March	54,168	44,273	79,587	69,031	47,671	21,274	18,508	61,068	70,520	81,875	96,171	March
April	53,280	49,537	91,855	74,477	53,138	28,539	27,975	67,532	69,338	91,049	100,508	April
May	52,435	55,281	94,940	62,080	47,805	27,491	35,132	60,348	59,324	79,379	96,945	May
June	46,990	44,169	98,164	51,466	41,496	23,572	43,448	48,292	65,785	81,185	91,826	June
July	33,853	59,630	78,703	44,960	35,386	15,137	39,310	44,546	61,582	71,383	83,993	July
August	36,796	69,547	59,985	43,296	32,890	15,319	42,601	53,890	58,942	63,794	87,794	August
September	36,448	62,231	54,683	46,557	31,876	20,003	35,874	46,335	33,229	47,496	55,023	September
October	38,152	63,921	66,235	41,928	22,406	14,157	30,772	49,643	60,203	35,359	31,939	October
November	26,102	45,013	50,368	37,493	20,118	12,560	19,106	35,107	60,720	54,628	67,516	November
December	28,400	32,454	28,582	34,840	24,052	21,782	30,801	42,814	64,629	77,636	88,117	December
Total	497,020	588,983	826,817	599,991	434,176	245,285	358,548	599,397	732,005	818,377	948,021	Total

Passenger Cars and Trucks

	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	
January	254,284	240,191	422,538	283,610	178,344	123,075	132,183	162,570	300,335	377,244	399,634	January
February	323,390	336,300	497,705	345,961	229,811	122,895	108,745	238,827	350,346	300,810	383,698	February
March	417,763	430,783	626,076	417,118	289,398	127,277	121,904	352,614	447,894	438,943	519,177	March
April	430,993	434,315	663,811	468,281	354,098	155,136	184,687	371,338	477,059	527,625	553,415	April
May	431,356	459,725	636,250	444,699	329,901	192,516	223,807	350,616	381,809	480,518	540,357	May
June	343,025	425,195	567,424	349,596	257,475	190,218	257,050	320,382	372,085	469,368	521,139	June
July	280,383	417,312	518,301	275,721	222,710	116,615	235,897	276,047	345,297	451,206	456,909	July
August	322,520	492,543	512,842	234,160	191,741	94,392	238,934	244,715	245,075	275,934	405,064	August
September	271,572	436,507	429,729	228,606	143,212	86,492	197,608	175,586	92,728	139,820	175,620	September
October	227,430	415,820	394,540	158,942	81,582	51,625	138,365	135,771	280,316	230,049	337,979	October
November	140,987	268,909	226,997	142,161	70,114	61,761	62,974	85,179	408,550	405,799	376,637	November
December	136,677	243,541	125,502	161,323	123,973	109,492	83,755	156,318	418,317	518,958	346,886	December
Total	3,580,380	4,601,141	5,621,715	3,510,178	2,472,359	1,431,494	1,985,909	2,869,963	4,119,811	4,616,274	5,016,515	Total

Figures from U. S. Census Bureau (includes overseas assemblies of motor vehicles of American make) and Dominion Bureau of Statistics.

Truck Production by Capacities

(U. S. and Canada)

Truck Tonnage	1931 Number	1931 %	1932 Number	1932 %	1933 Number	1933 %	1934 Number	1934 %	1935 Number	1935 %	1936 Number	1936 %	1937* Number	1937* %
¾ ton or less	109,220	25.2	79,127	32.3	98,928	27.6	172,089	28.6	249,957	34.1	316,208	38.6	389,648	41.1
1 ton and less than 1½	4,899	1.1	1,618	.6	893	.2	2,341	.4	2,259	.3	9,686	1.1	20,761	2.2
1½ ton and less than 2	289,418	66.6	144,113	58.8	228,238	63.7	376,475	62.9	420,597	57.5	423,503	52.0	461,018	48.6
2 ton and less than 2½	8,516	2.0	7,620	3.1	15,866	4.4	25,995	4.3	28,950	4.0	30,637	3.7	23,512	2.5
2½ ton and less than 3½	11,516	2.7	6,006	2.4	7,728	2.2	11,136	1.9	10,465	1.4	12,309	1.5	19,090	2.0
3½ ton and less than 5	4,532	1.0	2,689	1.1	2,859	.8	4,752	.8	3,612	.5	4,621	.5	6,357	.7
5 ton	906	0.2	1,407	.6	580	.2	1,219	.2	16,165	2.2	21,413	2.6	27,635	2.9
Over 5 ton and special types	5,169	1.2	2,705	1.1	3,356	.9	5,390	.9						
Total	434,176	100.0	245,285	100.0	358,548	100.0	599,397	100.0	732,005	100.0	818,377	100.0	948,021	100.0

* Partly estimated.

New Vehicle

New Passenger Car Registrations

	1929	1930	1931	1932	1933	1934	1935	1936	1937
Auburn	17,850	11,270	29,536	11,646	5,038	5,536	5,163	1,848	146
Austin	......	4,354	2,941	......	3,675	1,057	......	......	......
Buick	*172,307	*122,656	90,873	49,708	43,809	63,067	87,635	160,687	204,920
Cadillac	14,936	12,078	11,136	6,269	3,903	4,899	6,692	11,766	11,188
Chevrolet	780,011	618,884	583,429	322,860	474,493	534,906	656,698	930,250	767,870
Chrysler	84,518	60,908	52,650	26,016	28,677	28,052	40,536	58,698	91,500
Continental	......	......	......	......	3,310	953	......	......	......
Cord	799	1,879	1,416	335	......	......	......	1,174	1,147
DeSoto	59,614	35,267	28,430	25,311	21,260	11,447	26,952	45,088	74,330
DeVaux	......	......	4,808	1,358	......	......	......	......	......
Dodge	115,773	64,105	53,090	28,111	86,062	90,139	178,770	248,518	255,204
Durant	47,715	21,440	7,229	1,135	......	......	......	......	......
Ford	1,310,135	1,055,097	528,581	258,927	311,113	530,528	826,519	748,554	765,815
Franklin	10,704	7,482	3,881	1,829	1,329	360	......	......	......
Graham	60,487	30,140	19,209	12,858	10,128	12,887	15,965	16,439	13,964
Hudson	62,692	30,466	19,189	8,641	2,946	19,307	21,587	20,825	15,807
Hupmobile	44,337	24,307	17,427	10,794	6,726	6,566	7,450	1,556	400
La Fayette	......	......	......	......	......	9,301	17,445	......	......
La Salle	20,290	11,262	6,883	3,848	3,709	5,182	11,775	13,992	28,806
Lincoln	6,151	4,356	3,466	3,179	2,112	2,061	2,370	15,567	25,226
Marmon	*22,323	*12,369	5,687	1,365	86	......	......	......	......
Nash	105,146	51,086	39,366	20,233	11,353	14,315	17,739	*43,070	70,481
Oakland	31,830	21,648	12,985	......	......	......	......	......	......
Oldsmobile	*93,483	*50,510	*46,983	24,128	35,295	71,676	149,375	178,488	187,704
Packard	44,634	28,318	16,256	11,058	9,081	6,552	37,653	68,772	95,239
Pierce-Arrow	8,386	6,795	4,522	2,692	2,152	1,740	875	787	170
Plymouth	84,969	64,301	94,289	111,926	249,667	302,557	382,985	499,580	461,513
Pontiac	158,272	68,389	73,148	47,926	85,348	72,645	140,122	171,669	212,256
Reo	17,319	11,450	6,762	3,870	3,623	3,854	3,894	3,146	......
Rockne	......	......	2	16,966	14,554	......	......	......	......
Studebaker	82,839	56,526	46,533	25,002	21,688	41,560	39,573	67,835	69,863
Terraplane (Essex)	191,331	63,338	42,545	28,778	35,831	40,510	53,838	78,471	74,053
Willys-Whippet	162,366	51,687	42,936	22,483	15,314	6,576	10,439	12,423	51,202
Willys-Knight	37,343	14,079	8,405	3,415	353	......	......	......	......
Miscellaneous	31,646	9,532	3,548	3.732	1,159	324	1,858	5,294	1,449
Total	3,880,246	2,625,979	1,908,141	1,096.399	1,493,794	1,888,557	2.743,908	3,404,497	3,480,253

By Manufacturing Groups

	1929	1930	1931	1932	1933	1934	1935	1936	1937
Chrysler Corp.	344,874	224,581	228,459	191,364	385,666	432,195	629,243	851,884	882,547
Ford Motor Co.	1,316,286	1,059,453	532,047	262,106	313,225	532,589	828,889	764,121	791,041
General Motors	1,271,129	905,427	825,437	454,739	646,556	752,375	1,052,297	1,466,852	1,412,744
All Others	947,917	436,518	322,198	98,190	148,347	171,398	233,479	321,640	393,921

† Data from R. L. Polk & Co., except Wisconsin, which is estimated for last six months of 1937.

In Percentage of Total by Makes

	1929	1930	1931	1932	1933	1934	1935	1936	1937
Auburn	.46	.43	1.55	1.06	.34	.29	.19	.05	......
Austin	......	.17	.15	......	.25	.06	......	......	......
Buick	4.44	4.67	4.76	4.53	2.93	3.34	3.19	4.72	5.89
Cadillac	.38	.46	.58	.57	.26	.26	.24	.35	.32
Chevrolet	20.10	23.57	30.59	29.46	31.77	28.32	23.93	27.33	22.06
Chrysler	2.18	2.32	2.76	2.37	1.92	1.49	1.48	1.72	2.63
Continental	......	......	......	......	.22	.05	......	......	......
Cord	.02	.07	.07	.03	......	......	......	.03	.03
DeSoto	1.54	1.34	1.49	2.31	1.42	.61	.98	1.32	2.14
DeVaux	......	......	.25	.12	......	......	......	......	......
Dodge	2.98	2.44	2.78	2.56	5.76	4.77	6.52	7.30	7.33
Durant	1.23	.82	.38	.10	......	......	......	......	......
Ford	33.76	40.18	27.70	23.62	20.83	28.09	30.12	21.99	22.01
Franklin	.28	.28	.20	.17	.09	.02	......	......	......
Graham	1.56	1.15	1.01	1.17	.68	.68	.58	.48	.40
Hudson	1.62	1.16	1.01	.79	.20	1.02	.79	.61	.45
Hupmobile	1.14	.93	.91	.98	.45	.35	.27	.05	.01
La Fayette	......	......	......	......	......	.49	.64	......	......
La Salle	.52	.43	.36	.35	.25	.27	.43	.41	.83
Lincoln	.16	.17	.18	.29	.14	.11	.09	.46	.72
Marmon	.58	.47	.30	.12	.01	......	......	......	......
Nash	2.71	1.95	2.06	1.85	.76	.76	.65	1.27	2.03
Oakland	.82	.82	.68	......	......	......	......	......	......
Oldsmobile	2.41	1.92	2.46	2.20	2.36	3.80	5.44	5.25	5.39
Packard	1.15	1.08	.85	1.01	.61	.35	1.37	2.02	2.74
Pierce-Arrow	.22	.26	.24	.25	.14	.09	.03	.02	......
Plymouth	2.19	2.45	4.94	10.21	16.71	16.02	13.96	14.68	13.26
Pontiac	4.08	2.60	3.83	4.37	5.71	3.85	5.11	5.84	6.10
Reo	.45	.44	.35	.35	.24	.20	.14	.09	......
Rockne	......	......	......	1.55	.97	......	......	......	......
Studebaker	2.13	2.15	2.44	2.28	1.45	2.20	1.44	1.99	2.01
Terraplane (Essex)	4.93	2.41	2.23	2.62	2.40	2.15	1.96	2.30	2.13
Willys-Whippet	4.18	1.97	2.25	2.05	1.03	.35	.38	.36	1.47
Willys-Knight	.96	.54	.44	.31	.02	......	......	......	......
Miscellaneous	.82	.35	.20	.35	.08	.01	.07	.16	.05
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

By Manufacturing Groups

	1929	1930	1931	1932	1933	1934	1935	1936	1937
Chrysler Corp.	8.89	8.55	11.97	17.45	25.82	22.89	22.93	25.02	25.36
Ford Motor Co.	33.92	40.34	27.88	23.91	20.97	28.20	30.21	22.44	22.73
General Motors	32.75	34.48	43.26	41.48	43.28	39.84	38.35	43.09	40.59
All Others	24.44	16.63	16.89	17.16	9.93	9.07	8.51	9.45	11.32

*1929–1930
Buick includes Marquette.
Marmon includes Roosevelt.
Oldsmobile includes Viking.

*1931
Oldsmobile includes Viking.

*1936
Nash includes La Fayette for 10 months.

Registrations

1937 New Truck Registrations Make New Record‡

	1929	1930	1931	1932	1933	1934	1935	1936	1937
Autocar	2,941	2,009	1,748	1,015	1,127	1,139	1,001	1,451	2,185
Brockway	4,533*	3,780*	1,685*	752	875	1,213	1,245	1,695	1,593
Chevrolet	160,892	118,253	99,600	60,784	99,880	157,507	167,129	204,344	183,673
Diamond T	3,590	2,888	2,483	2,250	4,139	5,440	6,454	8,750	8,173
Dodge	28,567	15,558	13,518	8,744	28,034	48,252	61,488	85,295	64,123
Federal	2,853	2,095	1,523	1,167	1,360	1,962	2,190	2,930	2,336
Ford	223,405	197,216	138,854	66,937	62,397	128,250	185,848	177,244	189,271
G. M. C.	14,248	9,004	6,919	6,359	6,602	10,449	11,442	26,980	43,516
Indiana	....	....	....	957	1,252	729	862	1,705	1,338
International	31,434	23,703	21,073	15,752	26,658	31,555	53,471	71,958	76,310
Mack	6,823	4,943	2,945	1,425	1,652	1,830	1,515	4,226	5,493
Plymouth	....	....	....	....	....	....	660	2,420	13,671
Reo	12,894	6,427	5,166	3,187	3,042	5,035	5,101	4,227	4,234
Sterling	1,577	1,224	739	227	108	134	174	277	309
Stewart	2,163	2,315	1,394	867	684	736	880	1,280	1,137
Studebaker	1,661	1,518	3,495	2,430	2,407†	1,697	2,100	3,279	5,093
Terraplane	....	....	....	....	....	....	638	1,905	4,785
White	6,121	4,395	2,561	2,138	1,384	3,963	3,304	5,757	5,941
Willys	6,536	4,264	3,131	1,132	233	25	2,280	2,441	1,111
All Others	16,819	11,107	7,050	4,290	4,035	3,970	2,901	3,480	3,848
Total	527,057	410,699	313,884	180,413	245,869	403,886	510,683	611,644	618,140

*—Includes Indiana. †—Includes Rockne. ‡—Data from R. L. Polk & Co., except Wisconsin which is estimated for last six months of 1937.

New Motor Vehicle Registration by States*

	Total New Motor Vehicles			Per Cent of Total			Passenger Cars			Trucks		
	1935	1936	1937	1935	1936	1937	1935	1936	1937	1935	1936	1937
Alabama	39,332	48,385	47,810	1.21	1.21	1.17	29,407	35,198	34,936	9,925	13,187	12,874
Arizona	12,820	16,268	16,221	.39	.41	.40	9,694	12,758	12,562	3,126	3,510	3,659
Arkansas	25,211	29,097	30,629	.77	.72	.75	17,828	19,612	19,793	7,383	9,485	10,836
California	225,910	289,911	282,976	6.94	7.22	6.90	196,967	256,255	246,075	28,943	33,656	36,901
Colorado	32,141	44,781	40,916	.99	1.11	1.00	26,055	35,721	32,505	6,086	9,060	8,411
Connecticut	47,323	59,582	59,035	1.45	1.48	1.44	40,005	51,342	51,268	7,318	8,240	7,767
Delaware	8,544	10,200	11,630	.26	.25	.28	7,119	8,477	9,748	1,425	1,723	1,882
District of Columbia	31,501	35,727	31,116	.97	.89	.76	29,009	32,787	28,259	2,492	2,940	2,857
Florida	40,750	48,400	54,167	1.25	1.21	1.32	32,476	38,988	43,445	8,274	9,412	10,722
Georgia	49,157	56,522	61,821	1.51	1.41	1.51	38,270	43,581	48,823	10,887	12,941	12,998
Idaho	15,088	19,377	18,593	.46	.48	.45	11,084	14,438	14,139	4,004	41,939	4,454
Illinois	205,608	267,261	280,656	6.32	6.65	6.85	182,202	236,138	250,205	23,046	31,123	30,451
Indiana	109,038	136,307	142,240	3.35	3.39	3.47	91,029	116,280	123,971	18,009	20,027	18,269
Iowa	81,709	84,882	80,645	2.51	2.11	1.97	68,955	71,883	68,196	12,754	12,999	12,449
Kansas	59,270	65,500	68,724	1.82	1.63	1.68	49,665	54,094	56,315	9,605	11,406	12,409
Kentucky	44,851	50,979	52,988	1.38	1.27	1.29	35,762	40,109	41,391	9,089	10,870	11,597
Louisiana	36,480	47,224	44,195	1.12	1.18	1.08	29,279	37,471	34,084	7,201	9,753	10,111
Maine	17,215	23,227	25,706	.53	.58	.63	13,111	17,890	20,048	4,104	5,337	5,658
Maryland	47,785	51,610	54,134	1.47	1.29	1.32	41,128	44,228	46,371	6,657	7,382	7,763
Massachusetts	100,087	132,611	131,838	3.08	3.31	3.22	85,573	117,261	115,603	14,514	15,350	16,235
Michigan	203,708	251,808	265,705	6.26	6.27	6.48	182,604	226,968	241,156	21,104	24,840	24,549
Minnesota	78,198	95,917	96,429	2.40	2.39	2.35	65,458	81,773	82,874	12,740	14,144	13,555
Mississippi	25,799	35,373	33,822	.79	.88	.83	19,226	25,006	22,646	6,573	10,367	11,176
Missouri	91,115	107,829	109,135	2.80	2.68	2.66	74,915	87,687	89,965	16,200	20,142	19,170
Montana	23,344	26,675	23,106	.72	.66	.56	17,405	20,745	18,062	5,939	5,930	5,044
Nebraska	40,524	44,691	39,845	1.25	1.11	.97	34,227	37,695	33,640	6,297	6,996	6,205
Nevada	4,553	6,465	5,934	.14	.16	.14	3,547	5,255	4,767	1,006	1,210	1,167
New Hampshire	12,478	15,454	15,983	.38	.38	.39	9,988	12,258	12,961	2,490	3,196	3,022
New Jersey	99,214	128,672	140,549	3.05	3.21	3.43	86,049	111,737	122,103	13,165	16,935	18,446
New Mexico	12,369	15,426	15,870	.38	.38	.39	8,311	10,881	10,781	4,058	4,545	5,089
New York	278,310	342,482	371,873	8.55	8.53	9.07	242,505	303,323	329,951	35,805	39,159	41,922
North Carolina	69,825	63,650	71,032	2.15	1.58	1.73	55,990	49,364	55,341	13,835	14,286	15,691
North Dakota	15,756	13,775	15,253	.48	.34	.37	12,612	11,095	12,060	3,144	2,680	3,193
Ohio	203,160	274,893	278,632	6.24	6.84	6.80	180,388	244,865	250,192	22,772	30,028	28,440
Oklahoma	64,884	71,342	66,282	1.99	1.78	1.62	53,116	56,605	51,580	11,768	14,737	14,702
Oregon	31,713	48,510	43,774	.97	1.21	1.07	25,749	40,460	35,915	5,964	8,050	7,859
Pennsylvania	234,033	315,200	333,059	7.19	7.85	8.13	201,936	273,281	293,909	32,097	41,919	39,150
Rhode Island	16,898	21,903	23,249	.52	.55	.57	14,810	19,309	20,500	2,088	2,594	2,749
South Carolina	28,900	30,111	34,216	.89	.75	.83	23,419	24,020	26,959	5,481	6,091	7,257
South Dakota	16,551	16,518	15,387	.51	.41	.38	13,531	13,556	12,728	3,020	2,962	2,659
Tennessee	47,965	53,021	53,119	1.47	1.32	1.30	38,447	41,959	42,320	9,518	11,062	10,799
Texas	171,163	196,898	190,998	5.26	4.91	4.66	138,726	157,995	150,093	32,437	38,903	40,905
Utah	14,323	17,969	17,656	.44	.45	.43	10,825	14,398	14,358	3,498	3,571	3,298
Vermont	9,581	10,721	11,243	.29	.27	.27	7,187	8,413	8,799	2,394	2,308	2,444
Virginia	57,215	63,250	63,696	1.76	1.57	1.55	45,813	50,346	50,768	11,402	12,904	12,928
Washington	45,761	65,124	59,921	1.41	1.62	1.46	36,685	54,458	49,699	9,076	10,666	10,222
West Virginia	32,729	46,453	44,948	1.01	1.16	1.10	26,083	37,272	35,679	6,646	9,181	9,269
Wisconsin	85,686	105,806	110,042	2.63	2.63	2.69	72,568	89,569	93,742	13,118	16,237	16,300
Wyoming	9,376	12,354	11,595	.29	.31	.28	7,170	9,693	8,968	2,206	2,661	2,627
Total	3,254,591	4,016,141	4,098,393	100.00	100.00	100.00	2,743,908	3,404,497	3,480,253	510,683	611,644	618,140

* Data from R. L. Polk & Co., except Wisconsin which is estimated for last six months of 1937.

U. S. New Car Registrations and Estimated Dollar Volume

By Months

Month	1934			1935			1936			1937		
	Units†	Dollar* Volume	Average Price per Car	Units†	Dollar* Volume	Average Price per Car	Units†	Dollar* Volume	Average Price per Car	Units†	Dollar‡ Volume	Average Price per Car
January	61,195	$43,500,000	$711	136,527	$96,400,000	$706	215,771	$149,100,000	$691	280,350	$222,300,000	$768
February	94,867	65,200,000	687	170,526	119,300,000	700	176,646	120,900,000	684	214,834	167,800,000	781
March	173,264	120,800,000	697	261,421	182,600,000	698	301,256	207,900,000	690	363,477	286,200,000	787
April	220,868	161,500,000	731	319,590	225,400,000	705	397,103	275,700,000	694	385,187	305,300,000	793
May	219,142	156,800,000	716	293,149	199,900,000	682	391,542	271,100,000	692	391,608	309,900,000	791
June	223,624	158,900,000	711	280,309	190,900,000	681	368,469	253,500,000	688	360,159	285,100,000	792
July	228,734	156,000,000	682	285,161	192,500,000	675	356,815	244,600,000	686	365,783	288,200,000	788
August	193,805	131,100,000	676	233,820	157,700,000	674	262,709	181,800,000	692	307,285	244,600,000	796
September	146,898	99,300,000	676	157,071	107,000,000	681	208,517	143,800,000	689	231,851	187,600,000	809
October	140,858	88,100,000	625	147,801	106,700,000	722	170,959	122,000,000	713	202,471	168,000,000	830
November	107,616	69,800,000	649	219,710	152,100,000	692	222,787	162,700,000	730	196,133	176,200,000	898
December	75,490	47,600,000	631	237,161	164,600,000	694	326,697	236,900,000	725	179,687	157,900,000	879
Total	1,886,361	$1,298,600,000	$688	2,742,246	$1,895,100,000	$691	3,399,271	$2,370,000,000	$697	3,478,825	$2,799,100,000	$805

† The difference between the number of units shown here and those for new car registrations by years is due to the cars grouped under "Miscellaneous" of which no account is taken in these calculations.

** All calculations are based on list price F.O.B. factory of the five-passenger, four-door sedan in conjunction with new car registrations of each model.*

‡ These data are not comparable with previous years as during 1937 "Delivered Price at Factory" was used in place of the "List Price F.O.B. Factory" of former years.

U. S. Sales of New Cars and Trucks by Months for 11 Years*

U. S. New Passenger Car Registrations

	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	
January	174,638	136,071	219,760	180,094	126,776	87,493	79,821	61,242	136,635	215,775	280,606	January
February	179,920	165,537	235,590	211,645	134,133	82,813	69,464	94,887	170,615	176,651	214,970	February
March	260,134	254,214	377,802	298,824	200,841	92,192	78,741	173,287	261,477	301,239	363,570	March
April	329,687	332,056	481,675	357,064	265,732	121,093	119,909	223,650	319,650	397,186	385,277	April
May	317,932	351,459	454,132	345,031	247,727	131,282	160,242	219,225	293,199	392,744	391,697	May
June	268,066	317,069	386,398	260,861	201,911	148,752	174,190	223,864	280,360	369,422	360,236	June
July	250,315	324,120	432,503	254,098	194,322	104,188	185,660	229,006	285,178	357,490	365,843	July
August	245,961	329,674	376,886	203,737	155,744	93,457	178,661	193,198	233,851	262,912	307,393	August
September	187,678	271,821	304,452	175,286	124,903	81,893	157,976	146,931	157,098	208,896	232,000	September
October	185,383	284,939	288,697	150,219	102,659	63,195	136,326	140,937	148,389	171,397	202,591	October
November	134,635	211,736	183,756	93,066	75,829	44,358	94,180	107,574	220,262	223,732	196,250	November
December	89,189	160,883	138,555	96,054	77,564	45,683	58,624	75,356	237,194	327,053	179,820	December
Total	2,623,538	3,139,579	3,880,206	2,625,979	1,908,141	1,096,399	1,493,794	1,888,557	2,743,908	3,404,497	3,480,253	Total

U. S. New Truck Registrations

	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	
January	27,567	16,431	29,900	30,236	24,415	14,776	11,709	22,903	34,759	43,760	47,609	January
February	28,437	17,510	32,637	31,880	23,466	14,558	9,707	24,476	34,797	40,301	41,815	February
March	33,539	24,698	46,368	42,199	30,609	16,874	9,934	33,884	41,511	52,428	60,291	March
April	37,264	30,272	56,299	47,029	36,848	17,784	17,301	38,882	46,785	64,956	67,882	April
May	33,966	32,468	52,874	43,286	33,496	18,696	20,925	39,831	47,968	62,183	65,857	May
June	28,495	29,155	45,114	33,531	28,496	17,876	23,254	34,768	48,243	56,851	58,626	June
July	28,359	31,844	57,943	39,904	30,102	14,731	30,642	37,490	51,243	63,695	61,497	July
August	28,156	36,753	52,557	33,787	27,070	15,081	28,799	40,790	50,355	59,222	60,726	August
September	24,436	35,135	46,560	33,933	25,967	14,967	31,269	37,225	41,390	54,611	54,602	September
October	27,231	40,890	49,899	34,237	24,685	15,156	28,058	40,878	37,439	41,220	40,426	October
November	18,834	27,491	33,631	22,012	15,553	10,392	18,691	28,689	36,935	30,255	27,460	November
December	11,681	18,476	23,275	18,665	13,177	9,522	15,580	24,070	39,258	42,162	31,349	December
Total	327,965	341,123	527,057	410,699	313,884	180,413	245,869	403,886	510,683	611,644	618,140	Total

Total U. S. New Passenger Car and Truck Registrations

	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	
January	202,205	152,502	249,660	210,330	151,191	102,269	91,530	84,145	171,394	259,535	328,215	January
February	208,357	183,047	268,227	243,525	157,599	97,371	79,171	119,363	205,412	216,952	256,785	February
March	293,673	278,912	424,170	341,023	231,450	109,066	88,675	207,171	302,988	353,667	423,861	March
April	366,951	362,328	537,974	404,093	302,580	138,877	137,210	261,932	366,435	462,142	453,159	April
May	351,898	383,927	507,006	388,317	281,223	149,978	181,167	259,056	341,167	454,927	457,554	May
June	296,561	346,224	431,512	294,392	230,407	166,628	197,444	258,632	328,603	426,273	418,862	June
July	278,674	355,964	490,446	294,002	224,424	118,919	216,302	266,496	336,421	421,185	427,340	July
August	274,117	366,427	429,443	237,524	182,814	108,538	207,460	233,988	284,206	322,134	368,119	August
September	212,114	306,956	351,012	209,219	150,870	96,860	189,245	184,156	198,488	263,507	286,602	September
October	212,614	325,829	338,596	184,456	127,344	78,351	164,384	181,815	185,828	212,617	243,017	October
November	153,469	239,227	217,387	115,078	91,382	54,750	112,871	136,263	257,197	253,987	223,710	November
December	100,870	179,359	161,830	114,719	90,741	55,205	74,204	99,426	276,452	369,215	211,169	December
Total	2,951,503	3,480,702	4,407,263	3,036,678	2,222,025	1,276,812	1,739,663	2,292,443	3,254,591	4,016,141	4,098,393	Total

* Figures from R. L. Polk & Co., except Wisconsin which is estimated for last six months of 1937.

3,300,000 Motor Vehicles Scrapped in 1937

	U. S. Production	U. S. Net Export	U. S. Domestic Market	U.S. Registrations	Unadjusted Scrapped	Total Scrapped
1922....	2,544,176	126,589	2,417,587	12,239,853	642,449	794,957
1923....	4,034,012	234,224	3,799,788	15,092,177	947,464	877,143
1924....	3,602,540	292,522	3,310,018	17,595,373	806,822	1,151,381
1925....	4,265,830	427,989	3,837,841	19,937,274	1,495,940	1,670,335
1926....	4,300,930	392,080	3,908,850	22,001,393	1,844,731	1,824,228
1927....	3,401,326	465,749	2,935,577	23,133,243	1,803,727	2,110,219
1928....	4,358,759	582,165	3,776,594	24,493,124	2,416,713	2,516,873
1929....	5,358,420	733,066	4,625,354	26,501,443	2,617,035	2,706,192
1930....	3,355,986	405,006	2,950,980	26,657,072	2,795,351	2,803,718
1931....	2,389,730	240,821	2,148,909	25,993,896	2,812,085	2,857,569
1932....	1,370,678	119,699	1,250,979	24,341,822	2,903,053	2,569,475
1933....	1,920,057	176,049	1,744,008	23,849,932	2,235,898	1,823,270
1934....	2,753,111	310,933	2,442,178	24,881,467	1,410,643	1,583,967
1935....	3,946,954	280,638	3,666,316	26,225,757	2,322,026	2,310,614
1936....	4,454,115	293,791	4,160,324	28,091,709	2,294,368	2,566,975
1937....	4,809,515	406,795	4,402,720	29,654,847	2,839,582	*3,300,000

* Estimated.

Calculated by use of method devised by Oscar Pearson of the Automobile Manufacturers Association, though Automotive Industries count of motor vehicle registrations was used in place of those used by Mr. Pearson.

Gasoline Prices 1919-1937†

Average 50 Representative Cities in the United States

Cents per Gallon

	Service Station (ex. Tax)	State Gasoline Tax	Service Station (inc. Tax)
1919......	25.41	.06	25.47
1920......	29.74	.09	29.83
1921......	26.11	.20	26.31
1922......	24.83	.38	25.20
1923......	21.06	.91	21.97
1924......	19.47	1.48	20.95
1925......	20.09	2.11	22.20
1926......	20.97	2.41	23.38
1927......	18.29	2.80	21.09
1928......	17.90	3.04	20.94
1929......	17.92	3.50	21.42
1930......	16.17	3.78	19.95
1931......	13.00	4.00	17.00
1932......	13.30	4.63*	17.93
1933......	12.41	5.42*	17.83
1934......	13.64	5.20*	18.84
1935......	13.55	5.29*	18.84
1936......	14.10	5.35*	19.45
1937......	14.58	5.40*	19.99

* Including the Federal tax of one cent which became effective June 21, 1932. On June 17, 1933, it was increased to 1½ cents and on Jan. 1, 1934, it was reduced to one cent.

† Courtesy American Petroleum Institute.

Automotive Sales Outlets by States*

STATE	Total Registered Motor Vehicles 1937	WHOLESALERS: Number of Wholesalers	WHOLESALERS: Motor Vehicles Per Wholesaler	DEALERS: Passenger Car Dealers	DEALERS: Exclusive Truck Dealers	DEALERS: Total Car and Truck Dealers	DEALERS: Total Truck Dealers	DEALERS: Motor Vehicles Per Car and Truck Dealer	REPAIR SHOPS: Car Dealer Service Stations	REPAIR SHOPS: Independent Repair Shops	REPAIR SHOPS: Total Repair Shops	All Retail Outlets	Motor Vehicles Per Retail Outlet	All Truck Fleets (5 or more Vehicles)
Alabama	300,126	70	4,287	335	4	339	270	885	317	360	677	714	420	230
Arizona	129,210	27	4,785	161	13	174	98	742	149	145	294	324	398	102
Arkansas	233,888	65	3,598	450	29	479	326	488	426	545	971	1,031	226	172
California	2,483,473	497	4,996	2,137	211	2,348	1,307	1,057	2,017	5,065	7,082	7,529	329	2,008
Colorado	338,238	65	5,203	478	27	505	322	669	447	545	992	1,053	321	297
Connecticut	436,249	95	4,592	620	33	653	333	668	623	770	1,393	1,513	288	646
Delaware	86,843	12	7,236	65	5	70	27	1,240	68	130	198	214	405	92
Dist. of Col.	183,665	29	6,333	97	6	103	40	1,783	92	155	247	280	655	247
Florida	421,141	103	4,088	503	40	543	330	775	506	566	1,072	1,141	369	421
Georgia	442,444	96	4,608	554	27	581	414	761	547	382	929	989	447	340
Idaho	138,000	26	5,307	334	11	345	214	400	301	208	509	559	246	53
Illinois	1,777,341	364	4,882	2,592	107	2,699	1,661	658	2,511	2,750	5,261	5,690	312	2,531
Indiana	950,000	188	5,053	1,354	58	1,412	814	672	1,263	1,307	2,570	2,833	335	926
Iowa	742,726	156	4,761	1,617	123	1,740	1,140	426	1,550	1,525	3,075	3,383	219	447
Kansas	591,383	126	4,693	1,169	64	1,233	804	479	1,081	1,090	2,171	2,340	252	310
Kentucky	400,000	92	4,347	711	27	738	477	542	670	512	1,182	1,292	309	310
Louisiana	328,320	65	5,051	367	25	392	258	837	363	448	811	866	379	410
Maine	199,355	40	4,983	423	22	445	260	447	365	419	784	883	225	138
Maryland	383,523	64	5,992	472	16	488	199	785	451	595	1,046	1,118	343	533
Massachusetts	847,241	211	4,015	1,223	44	1,267	563	668	1,151	1,298	2,449	2,658	318	1,566
Michigan	1,508,886	221	6,827	1,900	96	1,996	1,162	755	1,809	1,793	3,602	3,830	393	1,524
Minnesota	822,069	103	7,981	1,640	66	1,706	863	481	1,576	1,495	3,071	3,248	253	577
Mississippi	224,579	53	4,237	382	17	399	309	562	378	257	635	671	334	89
Missouri	835,895	186	4,494	1,184	44	1,228	742	680	1,076	1,818	2,894	3,258	256	919
Montana	173,892	38	4,576	412	15	427	321	407	412	288	700	752	231	116
Nebraska	414,741	95	4,365	910	50	960	712	432	852	998	1,850	2,016	205	287
Nevada	40,655	10	4,066	129	6	135	75	301	121	91	212	237	171	38
New Hampshire	124,278	14	8,877	257	10	267	157	465	243	302	545	576	215	89
New Jersey	994,497	179	5,555	1,049	70	1,119	595	888	1,123	2,187	3,310	3,444	288	1,412
New Mexico	121,700	21	5,795	168	13	181	124	672	170	137	307	328	371	47
New York	2,602,000	533	4,881	3,173	214	3,387	1,838	768	3,124	5,396	8,520	9,140	284	3,430
North Carolina	520,533	100	5,205	699	29	728	371	715	673	643	1,316	1,436	362	346
North Dakota	173,198	29	5,972	548	36	584	395	296	528	503	1,031	1,118	154	51
Ohio	1,867,700	372	5,020	2,632	130	2,762	1,503	676	2,472	2,386	4,858	5,200	359	1,843
Oklahoma	547,263	115	4,758	965	32	997	541	548	897	886	1,783	2,017	271	332
Oregon	360,349	75	4,804	525	21	546	320	669	483	824	1,307	1,413	255	233
Pennsylvania	2,014,880	386	5,219	3,379	216	3,595	1,895	560	3,264	4,158	7,422	8,023	251	2,655
Rhode Island	168,839	30	5,627	214	6	220	101	767	197	311	508	558	302	288
South Carolina	279,628	43	6,502	338	11	349	215	801	328	199	527	556	502	164
South Dakota	184,717	28	6,597	492	29	521	370	354	466	452	918	975	189	52
Tennessee	383,964	91	4,219	471	15	486	317	790	422	479	901	981	391	391
Texas	1,459,477	315	4,633	2,077	202	2,279	1,394	640	2,074	2,622	4,696	5,110	285	878
Utah	126,615	38	3,331	229	21	250	132	506	224	226	450	499	253	156
Vermont	87,407	25	3,496	215	16	231	138	378	214	365	579	610	143	48
Virginia	432,185	77	5,612	735	28	763	371	566	670	869	1,539	1,651	261	367
Washington	534,119	141	3,788	771	59	830	696	643	761	1,268	2,029	2,179	245	478
West Virginia	290,624	70	4,151	530	33	563	329	516	527	415	942	1,013	286	315
Wisconsin	865,189	140	6,179	1,865	102	1,967	1,267	439	1,784	1,405	3,189	3,462	249	782
Wyoming	81,802	15	5,453	196	8	204	138	400	190	121	311	342	239	64
TOTAL	29,654,847	5,934	†4,997	43,747	2,487	46,224	27,248	†641	41,956	51,709	93,665	101,053	†293	29,750

† Average. * Chilton Trade List count as of January, 1938.

Passenger Car Dealer Representations by Makes—By Years†

	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
Plymouth	....	....	....	7,218	7,351	6,276	7,642	9,537	11,487	11,072	11,143
Chevrolet	8,381	8,987	9,553	9,558	9,412	9,039	8,885	8,578	8,667	8,776	8,752
Ford	9,375	8,731	8,598	8,833	8,735	8,280	7,480	7,388	7,948	8,301	8,245
Total (All Three)	17,756	17,718	18,151	25,609	25,498	23,595	24,007	25,503	28,102	28,149	28,140
Dodge	3,667	3,212	2,994	2,842	2,663	2,722	2,772	3,297	3,772	4,087	4,380
Pontiac	3,273	4,386	4,545	3,435	2,887	2,503	2,336	2,314	2,791	3,413	4,006
Chrysler	3,455	3,647	3,337	3,007	3,454	2,999	3.511	4,360	4,309	4,097	3,837
Hudson-Terraplane	3,754	3,508	3,488	2,863	2,270	1,761	1,842	2,641	3,023	3,263	3,390
De Soto	....	307	1,133	1,369	1,234	1,252	1,359	1,880	3,406	2,888	2,926
Buick	3,597	3,533	3,241	3,003	2,608	2,472	2,273	2,303	2,465	2,516	2,750
Oldsmobile	1,845	1,656	1,668	1,592	1,426	1,351	1,418	1,611	2,227	2,454	2,588
Studebaker	2,546	2,262	2,242	1,971	1,999	1,927	1,733	1,986	1,832	2,080	2,335
Nash	2,280	1,986	2,123	1,884	1,677	1,430	1,201	1,283	1,400	1,314	1,753
Willys-Overland	4,295	4,669	4,751	3,783	2,904	2,739	....	....	....	580	1,476
Packard	739	762	776	721	682	624	540	486	843	1,128	1,283
Graham	1,389	1,492	1,751	1,469	1,206	1,079	920	782	1,120	958	877
Cadillac-La Salle	815	762	722	700	654	602	563	541	649	648	803
Hupmobile	1,291	1,265	1,296	1,084	991	854	699	763	771	....	302
Pierce-Arrow	244	214	266	312	449	385	350	243	174	118	70
Total	33,190	33,661	34,333	30,035	27,104	24,700	21,517	24,490	28,782	29,544	32,776
Miscellaneous	11,441	11,493	10,570	7,097	6,571	5,142	4,504	3,609	2,872	1,661	2,219
Grand Total Representations	62,387	62,872	63,054	62,741	59,173	53,437	50,028	53,602	59,756	59,354	63,135

† Chilton Trade List Count.

Dealer Representations by States—by Makes*

(As of January 1, 1938)

STATES	Buick	Cadillac-La Salle	Chevrolet	Chrysler	De Soto	Dodge	Ford	Graham	Hudson-Terraplane	Hupmobile	Nash	Oldsmobile	Packard	Pierce-Arrow	Plymouth	Pontiac	Studebaker	Willys	Miscellaneous	TOTAL
Alabama	24	5	91	28	21	29	88	1	26	......	7	26	5	......	78	82	8	8	27	500
Arizona	13	9	30	16	20	16	31	3	6	1	6	11	3	......	52	17	17	3	3	257
Arkansas	25	4	114	36	21	38	112	8	43	......	7	15	5	......	95	47	23	8	14	615
California	162	55	312	157	147	222	355	56	141	9	71	158	77	4	526	179	149	134	228	3,142
Colorado	36	5	96	48	27	39	87	15	45	4	18	25	14	1	114	39	23	15	15	666
Connecticut	39	17	94	56	51	60	88	31	48	15	28	36	26	3	167	53	40	31	60	943
Delaware	4	4	13	3	8	8	11	1	2	2	3	4	1		19	8	4	1	3	99
District of Columbia	2	1	10	7	8	8	23	3	9	1	2	6	10	1	23	4	6	3	9	136
Florida	28	17	95	49	29	50	110	6	37	1	12	32	23	......	128	51	22	26	41	757
Georgia	30	7	142	50	20	56	152	3	24	4	11	37	18	2	126	38	24	22	43	809
Idaho	21	......	63	27	26	32	59	11	39	2	14	24	7	......	85	24	28	6	9	477
Illinois	187	51	504	220	179	261	464	49	186	24	121	144	81	1	660	235	140	87	117	3,711
Indiana	97	28	253	103	89	115	238	18	132	14	51	90	36	2	307	134	94	41	78	1,920
Iowa	124	11	441	146	81	163	307	18	120	7	54	86	37	1	390	139	79	37	74	2,315
Kansas	63	10	257	95	89	109	255	8	114	1	44	55	17	2	293	101	54	35	43	1,645
Kentucky	56	10	132	68	42	78	147	17	57	2	19	55	21	1	188	85	37	22	32	1,069
Louisiana	19	10	92	30	17	33	88	2	28	1	14	23	5	......	80	27	12	9	20	510
Maine	20	10	79	31	23	45	81	11	39	1	32	19	13	1	99	39	20	6	5	574
Maryland	24	9	76	53	37	63	83	14	38	......	16	25	14	2	153	47	30	13	15	712
Massachusetts	56	43	190	100	90	119	177	47	102	11	73	89	62	4	309	111	68	28	47	1,726
Michigan	133	38	391	132	110	192	350	39	206	22	70	131	71	1	434	209	75	56	82	2,742
Minnesota	115	14	395	178	101	170	319	23	130	13	53	63	27	1	449	131	73	47	21	2,323
Mississippi	16	4	114	36	22	40	96	1	24	1	9	14	14	......	98	27	9	10	19	554
Missouri	61	20	297	96	82	115	229	10	59	3	40	63	29	1	293	114	45	51	40	1,648
Montana	26	6	94	46	13	41	86	5	32	3	25	25	12	1	100	33	31	8	20	607
Nebraska	60	3	228	89	53	93	207	6	58	2	36	36	13	......	235	74	49	25	27	1,294
Nevada	11	1	24	13	8	13	25	2	10	1	14	6	3	2	34	14	10	3	5	199
New Hampshire	12	6	57	20	14	27	52	9	19	......	16	15	8	......	61	20	10	9	3	358
New Jersey	69	45	167	94	87	111	190	32	69	12	50	81	40	5	292	119	66	42	94	1,665
New Mexico	16	2	41	20	7	15	35	2	15	2	4	13	5	......	42	20	9	2	3	253
New York	175	92	488	296	223	360	532	70	220	32	149	225	131	13	879	296	183	127	242	4,733
North Carolina	52	15	153	72	35	68	161	8	49	1	14	39	22	1	175	58	24	15	15	977
North Dakota	28	2	152	48	29	46	144	1	63	2	14	11	4	......	123	33	23	14	6	743
Ohio	155	36	462	196	222	259	434	86	267	14	128	159	85	4	677	222	148	108	86	3,748
Oklahoma	57	12	205	57	53	95	173	3	59	1	12	45	13	2	205	172	41	14	37	1,256
Oregon	27	14	104	47	41	49	84	18	37	5	29	35	10	1	137	44	29	33	33	777
Pennsylvania	213	70	532	324	248	361	518	100	232	32	192	211	128	7	933	306	225	152	196	4,980
Rhode Island	11	4	30	22	19	17	35	9	26	4	11	16	11		58	13	22	3	17	328
South Carolina	25	3	84	31	13	29	88	2	22	2	3	18	7	......	73	32	13	7	8	460
South Dakota	31	5	137	45	25	42	128	3	21	......	12	16	6	1	112	33	19	9	20	665
Tennessee	29	9	108	47	34	56	95	1	32	6	15	33	11	......	137	41	15	10	32	711
Texas	120	30	474	205	142	195	428	12	167	9	43	90	36	1	542	176	100	36	68	2,874
Utah	13	2	33	15	23	26	47	10	23	6	7	10	5	......	64	13	20	7	10	334
Vermont	10	5	48	16	13	23	41	11	16	......	11	17	8	......	52	16	12	12	10	321
Virginia	46	9	149	70	43	64	182	12	46	6	12	44	21	......	177	75	18	18	17	1,009
Washington	34	12	137	63	51	86	133	29	61	6	26	58	16	2	200	63	48	29	55	1,109
West Virginia	32	11	100	49	40	45	88	17	43	7	17	36	17	1	134	51	28	38	27	781
Wisconsin	126	26	426	165	133	174	352	28	132	10	135	107	52	1	472	180	98	53	136	2,806
Wyoming	17	1	38	22	17	24	37	6	16	......	3	11	3	......	63	15	14	3	7	297
TOTAL	2,750	803	8,752	3,837	2,926	4,380	8,245	877	3,390	302	1,753	2,588	1,283	70	11,143	4.006	2,335	1,476	2,219	63,135

*Chilton Trade List count

For additional dealer information see page 296.

Automotive Exports

Leading Automotive Export Markets—1937

U. S. Factory Shipments only—does not include Canadian exports

Passenger Cars and Chassis

Country of Destination	Value	Number
Union of South Africa	$21,011,037	37,069
Canada	10,615,285	15,152
Belgium	10,387,310	18,015
Argentina	10,382,802	20,680
Australia	8,290,272	21,935
Sweden	7,848,500	13,787
Mexico	6,075,662	9,121
United Kingdom	5,746,182	7,860
Brazil	4,439,614	7,540
Hawaii	3,440,206	4,951
British India	3,245,904	5,635
Japan	3,091,664	6,222
Venezuela	3,031,212	4,629
Philippine Islands	2,914,895	4,127
Cuba	2,912,880	4,127
New Zealand	2,712,886	4,583
Egypt	2,658,635	3,989
Puerto Rico	2,017,499	2,813
Columbia	1,927,610	2,652
Uruguay	1,770,394	3,129
Total	$114,520,449	198,016
Total All Countries	$140,638,203	237,719

Trucks, Buses and Chassis

Country of Destination	Value	Number
France	$8,583,454	7,242
Argentina	5,948,953	11,840
Belgium	5,491,165	10,710
Mexico	4,983,345	6,748
Union of South Africa	4,839,063	8,819
Canada	4,565,220	3,801
Portugal	4,539,811	5,247
Japan	3,875,283	10,462
British India	3,762,190	9,063
Brazil	3,653,192	6,757
Australia	3,567,293	7,418
Venezuela	3,417,934	4,964
Sweden	3,269,288	7,609
Philippine Islands	2,207,929	3,437
Iran	2,128,702	1,278
Egypt	1,815,643	3,943
Cuba	1,813,740	3,060
United Kingdom	1,812,289	3,417
Hawaii	1,607,772	1,788
Norway	1,581,067	2,758
Total	$73,463,333	120,361
Total All Countries	$102,889,939	169,076

13% American Production Sold Outside U. S.

	Pass. Cars	Trucks	Cars and Trucks
1923	8.1	18.1	9.1
1924	10.1	21.5	11.4
1925	11.6	24.9	13.3
1926	11.4	25.8	13.2
1927	15.5	34.1	18.1
1928	15.3	35.5	17.9
1929	13.7	40.9	17.7
1930	12.8	31.0	15.9
1931	9.8	28.8	13.1
1932	10.4	23.4	12.6
1933	9.3	25.2	12.2
1934	12.2	25.1	14.9
1935	10.2	22.1	12.3
1936	9.0	20.6	11.0
1937	9.6	23.4	12.6

United States Exports of Passenger Cars and Trucks‡

By Years—1904-1937

PASSENGER CARS						TRUCKS					
Year	Number	Value	Year	Number	Value	Year	Number	Value	Year	Number	Value
1904	....	*$1,895,605	1921	30,950	$32,533,725	1904	......	....	1921	7,840	$10,335,893
1905	....	*2,481,243	1922	66,791	51,049,816	1905	......	....	1922	11,443	80,270,708
1906	....	*3,497,016	1923	127,035	90,692,272	1906	......	....	1923	24,859	15,317,136
1907	**2,862	4,890,886	1924	151,380	112,534,729	1907	......	....	1924	27,352	19,199,344
1908	**2,477	4,656,991	1925	244,306	184,885,830	1908	......	....	1925	58,625	37,703,402
1909	**3,184	5,387,021	1926	238,540	176,432,157	1909	......	....	1926	66,880	47,176,107
1910	**6,926	9,548,700	1927	278,748	207,966,456	1910	......	....	1927	105,447	70,123,600
1911	**11,803	12,965,049	1928	368,329	263,575,739	1911	......	....	1928	138,768	91,360,853
1912	**21,757	21,550,139	1929	339,447	234,291,394	1912	......	....	1929	196,760	111,435,125
1913	24,293	24,275,793	1930	153,088	106,075,187	1913	993	$1,737,141	1930	84,542	55,821,343
1914	28,306	25,392,963	1931	80,430	49,153,682	1914	784	1,181,611	1931	47,927	24,977,874
1915	23,880	21,113,956	1932	40,656	23,286,220	1915	13,996	39,140,682	1932	24,837	11,644,199
1916	56,234	40,660,263	1933	63,754	31,805,237	1916	21,265	56,805,548	1933	43,279	20,000,159
1917	64,808	48,612,632	1934	143,914	77,783,361	1917	15,977	42,343,502	1934	92,397	44,069,120
1918	36,936	36,278,292	1935	172,572	94,510,757	1918	10,308	26,814,952	1935	98,811	50,456,406
1919	67,145	73,700,527	1936	179,957	103,024,254	1919	15,585	35,425,437	1936	105,799	54,854,366
1920	142,508	165,255,921	1937	229,486	134,814,725	1920	29,136	46,775,781	1937	165,710	100,105,472

*—Includes motor vehicles and parts. **—Includes all types of motor vehicles.
‡—Automotive Trade Division—Bureau of Foreign and Domestice Commerce.

Note:—Figures prior to 1932 include used vehicles.
Figures do not include exports to non-contiguous territories.

American Passenger Car Exports*

COUNTRIES	Not over $850		Over $850, not over $1200		Over $1200 not over $2000		Over $2000		Total 1937 Passenger Cars		Total 1936 Passenger Cars	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
Europe	50,963	$27,723,014	5,891	$5,609,587	910	$1,448,448	458	$1,207,206	58,222	$35,988,255	42,602	$25,868,946
North America	27,006	16,541,405	4,265	4,047,955	627	921,196	248	716,077	32,146	22,226,633	22,359	15,113,645
South America	38,871	20,722,606	2,827	2,668,637	265	410,011	72	171,570	42,035	23,972,824	26,788	15,556,309
Asia	22,469	12,292,634	1,890	1,800,318	397	578,809	101	271,141	24,857	14,942,902	21,213	12,294,434
Oceania	26,239	10,686,240	374	329,053	34	49,237	9	33,166	26,656	11,097,696	24,313	9,876,952
Africa	42,843	23,892,482	2,507	2,333,835	170	245,037	50	115,061	45,570	26,586,415	42,759	24,362,214
Total	208,391	$111,858,381	17,754	$16,789,385	2,403	$3,652,738	938	$2,514,221	229,486	$134,814,725	180,034	$103,072,500
Alaska	....	....	....	....	....	....	....	....	400	319,625	379	296,436
Hawaii	4,525	2,964,100	379	370,633	27	43,307	20	62,166	4,951	3,440,206	3,659	2,440,548
Puerto Rico	2,374	1,544,706	388	378,120	33	49,796	18	44,877	2,813	2,017,499	2,470	1,674,851
Virgin Islands	60	37,802	9	8,346	....	....	....	....	69	46,148	....	....
Grand Total	215,350	$116,404,989	18,530	$17,546,484	2,463	$3,745,841	976	$2,621,264	237,719	$140,638,203	186,542	$107,484,335

* Automotive Division, Bureau of Foreign and Domestic Commerce.

For additional export data see page 293.

Aeronautical Data

U. S. Airplane and Engine Production*

	AIRPLANES				AIRPLANE ENGINES			
	Military		Commercial		Military		Commercial	
	Units	Value	Units	Value	Units	Value	Units	Value
1926	532	$6,154,708	604	$2,716,319	842	$4,080,571	....	....
1927	621	7,528,383	1,565	6,976,616	1,397	6,550,533	....	....
1928	1,219	19,066,379	3,542	17,194,298	2,620	12,407,920	632	$979,600
1929	677	10,832,544	5,357	33,624,756	1,861	8,600,530	5,517	17,895,300
1930	747	10,723,720	1,937	10,746,042	1,841	10,823,423	1,925	6,255,493
1931	812	12,971,625	1,582	6,655,738	1,800	10,417,718	1,976	4,192,600
1932	592	10,389,316	549	2,337,899	1,085	6,370,678	816	2,898,371
1933	466	9,784,643	591	6,180,900	860	4,986,168	1,120	4,724,441
1934	437	8,836,509	772	9,957,602	688	5,162,710	2,048	10,270,500
1935	459	11,418,382	1,109	10,410,334	991	6,180,311	1,974	6,511,298
1936	1,141	27,836,199	1,559	12,379,835	1,804	14,569,708	2,433	7,520,900
1937	949	37,071,160	2,281	19,188,945	1,989	14,828,850	4,095	15,290,820

* Aeronautical Chamber of Commerce of America, Inc.

1937 Production of Aircraft Engines By Types

HP.	MILITARY Units	MILITARY Value	COMMERCIAL Units	COMMERCIAL Value
Under 75	....	$	1,413	$ 464,105
76–125	6	7,070	281	283,165
126–175	....	....	213	313,382
176–225	101	229,995	102	218,690
226–300	214	573,441	348	921,997
301–400	1	3,712	27	102,425
401–500	301	1,450,412	445	1,992,330
501–600	90	469,700	108	650,760
601–700	....	....	43	254,565
701–Up	1,276	12,094,520	1,115	10,089,401

Sales of Aircraft Parts*

	AIRCRAFT			
	Military	Commercial	Miscellaneous	Total
1930	$4,108,167	$3,442,573	$ 475,002	$8,025,742
1931	4,627,838	1,912,481	499,857	7,039,932
1932	3,701,838	974,439	348,770	5,025,047
1933	3,127,255	945,336	140,340	4,212,931
1934	2,168,856	1,540,564	436,425	4,145,845
1935	2,857,201	2,090,176	755,698	5,703,075
1936	4,445,852	3,147,964	634,373	8,288,189
1937	10,056,826	7,010,242	1,891,733	19,617,151
	AIRCRAFT ENGINES			
	Military	Commercial	Miscellaneous	Total
1930	$2,231,370	$2,487,576	$ 494,216	$5,213,162
1931	3,904,739	1,747,654	267,400	5,919,793
1932	3,699,848	1,241,878	73,644	5,015,370
1933	1,961,033	1,567,604	67,843	3,596,480
1934	1,543,730	2,517,592	299,377	4,360,699
1935	2,351,238	2,289,244	351,236	4,991,718
1936	3,630,224	2,327,394	619,101	6,575,719
1937	3,874,463	3,810,527	1,310,947	8,995,937

* Aeronautical Chamber of Commerce of America, Inc.

1937—U. S. Airplane Production By Types*

TYPE	Units	Value
Open Cockpit Biplane		
1 place	.....	....
2 places	13	$79,153
3 places	1	8,107
Total	14	$ 87,260
Cabin—Single-Engined Biplane	201	$1,186,579
Cabin—Multi-Engined Biplane	4	125,224
Total Biplanes	219	$1,399,063
Open Cockpit Monoplanes		
2 places	33	$ 92,025
3 places	9	403,200
Total	42	$ 495,225
Cabin—Single Engined Monoplanes		
1 place	.....	....
2 places	1,523	$1,773,372
3 places	110	492,620
4 places	175	971,426
Total	1,808	$3,236,418
Cabin—Multi-Engined Monoplanes	183	$11,494,713
Total Monoplanes	2,033	$15,227,356
Seaplanes	8	1,074,500
Amphibions	21	1,488,026
Autogiros	.....	....
Total	29	$2,562,526
Total—Commercial	2,281	$19,188,945
Total—Military	949	$37,071,160
Grand Total	3,230	$56,260,105

*Aeronautical Chamber of Commerce of America, Inc.

1937 Aeronautical Exports Up 71 Per Cent*

Year	Aircraft	Aircraft Engines	Parts and Accessories†	Total
1926	$303,149	$573,732	$150,329	$1,027,210
1927	848,568	484,875	570,117	1,903,560
1928	1,759,653	664,826	1,240,244	3,664,723
1929	5,484,600	1,383,197	2,257,548	9,125,345
1930	4,819,669	1,634,985	2,363,456	8,818,110
1931	1,812,809	1,432,229	1,622,649	4,867,687
1932	4,358,967	1,831,145	1,756,421	7,946,533
1933	5,389,739	1,518,309	2,247,834	9,155,882
1934	8,258,484	4,383,101	4,906,596	17,548,181
1935	6,638,515	2,459,317	5,233,011	14,330,843
1936	11,299,451	5,397,469	6,358,841	23,055,761
1937	21,036,361	5,944,004	12,425,108	39,405,473

* Automotive—Aeronautics Trade Division, Bureau of Foreign and Domestic Commerce. † Includes parachutes.

Estimated Number of Cars in Use

(As of Oct. 31, 1937)

By Makes

	Number Surviving	Per Cent of Total in Use
Ford	4,944,601	26.60
Chevrolet	4,735,866	25.47
Plymouth	2,031,309	10.92
Dodge	1,011,080	5.44
Pontiac	879,328	4.73
Buick	830,880	4.47
Oldsmobile	729,234	3.92
Terraplane-Essex	487,343	2.62
Chrysler	405,380	2.18
Studebaker	381,560	2.05
Willys-Overland	326,772	1.76
Nash-LaFayette	321,992	1.73
Packard	269,588	1.45
DeSoto	251,740	1.35
Hudson	157,500	.85
Graham	143,362	.77
Hupmobile	89,302	.48
La Salle	85,244	.46
Cadillac	69,061	.37
Auburn	65,102	.35
Lincoln	55,549	.30
Durant	51,503	.28
Reo	41,777	.22
Pierce-Arrow	19,843	.11
Franklin	18,606	.10
Total	18,403,522	98.98
Miscellaneous	190,251	1.02
Total in use	18,593,773	100.00

By Year of Manufacture

Year of Manufacture	New Registrations	Per Cent Surviving	Number Surviving	Per Cent of Total
1937	†3,656,047	99.5	3,637,767	19.55
1936	†3,311,090	98.7	3,268,046	17.58
1935	‡2,286,452	97.5	2,229,291	11.99
1934	1,888,557	95.1	1,796,018	9.66
1933	1,493,794	92.0	1,374,290	7.39
1932	1,096,399	85.0	931,939	5.01
1931	1,908,141	75.0	1,431,106	7.70
1930	2,625,979	55.0	1,444,288	7.78
1929	3,880,206	34.5	1,338,671	7.20
1928	3,139,579	19.0	596,520	3.21
1927	2,623,538	10.0	262,354	1.41
1926	3,228,401	5.0	161,420	.87
1925	3,870,744	2.3	89,027	.48
1924	3,303,646	1.0	33,036	.17
Total			18,593,773	100.00

† Model year ending Oct. 31.
‡ Ten months or 1935 model year period.

These data present the relative position of passenger cars by makes and by year of manufacture as to total cars in use. They should not be confused with total registrations found in other sections of this issue, as junkers or cars out of service and also many of the duplications found in a count of registrations have been eliminated. It is purely a statistical presentation, but it is believed that the tables are a reasonably correct picture of the situation at the end of the 1937 model year. For total cars in use at the end of the calendar year approximately 376,000 units should be added to the present total.

By Makes and by Year of Manufacture

	†1937	†1936	‡1935	1934	1933	1932	1931	1930	1929	1928	1927 and Older
Auburn	279	2,192	4,709	5,265	4,635	9,899	22,152	6,199	6,158	2,119	1,495
Buick	207,768	145,982	61,164	59,977	40,304	42,252	68,155	67,461	59,446	37,181	41,190
Cadillac	12,230	11,447	4,394	4,659	3,591	5,329	8,352	6,643	5,153	3,445	3,818
Chevrolet	801,976	895,967	522,146	508,696	436,534	274,431	437,572	340,386	269,104	145.895	103,159
Chrysler	91,058	50,393	34,960	26,677	26,383	22,114	39,488	33,499	29,159	26,942	24,707
DeSoto	73,955	39,166	22,613	10,886	19,559	21,514	21,323	19,397	20,567	2,760	.....
Dodge	270,435	236,047	142,247	85,722	79,177	23,894	39,818	35,258	39,942	28,223	30.317
Durant	......	......	......	......	.....	965	5,422	11,792	16,462	6,414	10,448
Ford	805,488	758,672	697,463	504,532	286,224	220,088	396,436	580,303	451,997	91,455	151,943
Franklin	......	......	......	342	1,223	1,555	2,911	4,115	3,693	1,410	3,357
Graham	15,064	15,528	13,780	12,256	9,318	10,929	14,407	16,577	20,868	11,099	3,536
Hudson	16,477	21,346	16,984	18,361	2,710	7,345	14,392	16,756	21,629	9,179	12,321
Hupmobile	195	2,346	6,442	6,244	6,188	9,175	13,070	13,369	15,296	10,534	6,443
La Salle	29,714	11,560	9,343	4,928	3,412	3,271	5,162	6,194	7,000	3,563	1,097
Lincoln	25,415	12,610	1,363	1,960	1,943	2,702	2,600	2,396	2,122	1,145	1,293
Nash-LaFayette	71,180	36,381	29,162	22,459	10,445	17,198	29,525	28,097	36,275	21,854	19,416
Oldsmobile	191,948	179,375	118,762	68,164	32,471	20,509	35,237	27,781	32,252	13,985	8,750
Packard	98,438	62,115	28,275	6,231	8,355	9,399	12,192	15,575	15,399	8,149	5,460
Pierce-Arrow	255	828	705	1,655	1,980	2,288	3,392	3,737	2,893	1,090	1,020
Plymouth	498,768	466,880	312,130	287,732	229,694	95,137	70,717	35,366	29,314	5,571	....
Pontiac	220,321	159,884	114,759	69,085	78,520	40,737	54,861	37,614	54,604	34,927	14,016
Reo	203	3,419	3,288	3,665	3,333	3,290	5,072	6,298	5,975	4,060	3,174
Studebaker	74,121	60,698	32,767	39,524	19,953	21,252	34,900	31,089	28,579	20,336	18,341
Terraplane-Essex	80,579	73,918	42,743	38,525	32,965	24,461	31,909	34,836	66,009	33,659	27,739
Willys-Overland	48,193	12,784	8,022	6,254	14,414	22,013	38,506	36,171	68,900	43,883	27,632
Total	3,634,060	3,259,538	2,228,221	1,793,799	1,353,331	911,747	1,407,571	1,416,909	1,308,796	568,878	520,672

† Model year ending Oct. 31. ‡ Ten months or 1935 model year.

AMERICAN PASSENGER

CAR MAKE AND MODEL	Wheelbase (In.)	Tread (In.)		Tire Size (In.)	Shipping Weight—Cheapest 4-Door Sedan	ENGINE														VALVES		
		Front	Rear			No. of Cylinders, Bore and Stroke (In.)	Taxable Hp.	Piston Displacement (Cu. In.)	Maximum Brake Hp. at Specified R.P.M.	Maximum Torque (Lb.-Ft.) at Specified R.P.M.	Standard Compression Ratio	Cylinder Head Material	Comp. Pressure (Lb.) Pressure	Comp. Pressure (Lb.) At What R.P.M.	Weight per Cu. In. 5 Pass., 4-Door Sedan	Weight per Hp. 5 Pass., 4-Door Sedan	Hp. per Cu. In.	Displacement Factor ††	Crankshaft † Revolutions per Mile	Arrangement	Intake Head Diam.	Intake Seat Angle
Bantam ... 60	75	40	$42\frac{1}{2}$	5.00/15	1200	4-2.2x3.0	7.7	45.6	20-4000	31-2000	7.00	Al	90	150	26.31	60.0	.438	.....	.....	L	1.03	30
Buick-Special ... 38-40	122	$58\frac{7}{32}$	$59\frac{5}{32}$	6.50/16	3535	$8-3\frac{3}{32}x4\frac{1}{8}$	30.6	248.0	107-3400	203-2000	6.15	CI	126	1000	14.25	33.0	.432	39.2	3190	I	1.53	45
Buick-Century ... 38-60	126	$58\frac{5}{16}$	$59\frac{1}{4}$	7.00/15	3785	$8-3\frac{7}{16}x4\frac{5}{16}$	37.8	320.2	141-3600	269-2000	6.35	CI	130	1000	11.83	26.8	.441	42.3	2859	I	1.78	45
Buick-Roadmaster ... 38-80	133	$59\frac{19}{32}$	$62\frac{1}{2}$	7.00/16	4245	$8-3\frac{7}{16}x4\frac{5}{16}$	37.8	320.2	141-3600	269-2000	6.35	CI	130	1000	13.25	30.2	.441	39.3	2922	I	1.78	45
Buick-Limited ... 38-90	140	$59\frac{7}{16}$	$62\frac{1}{2}$	7.50/16	4585	$8-3\frac{7}{16}x4\frac{5}{16}$	37.8	320.2	141-3600	269-2000	6.35	CI	130	1000	14.33	32.5	.441	38.6	3076	I	1.78	45
Cadillac-V8 ... 38-60	124	58	59	7.00/16	.....	$8-3\frac{1}{2}x4\frac{1}{2}$	39.2	346.0	135-3400	250-1700	6.25	CI	155	1000	.....	.....	.390	.....	2740	L	1.88	45
Cadillac-V8 ... 38-60 S	127	58	61	7.00/16	.....	$8-3\frac{1}{2}x4\frac{1}{2}$	39.2	346.0	135-3400	250-1700	6.25	CI	155	1000	.....	.....	.390	.....	3124	L	1.88	45
Cadillac-V8 ... 38-65	132	$60\frac{1}{2}$	$62\frac{3}{8}$	7.50/16	4540	$8-3\frac{1}{2}x4\frac{1}{2}$	39.2	346.0	135-3400	250-1700	6.25	CI	155	1000	13.15	33.7	.390	42.8	3124	L	1.88	45
Cadillac-V8 ... 38-75	141	$60\frac{1}{2}$	$62\frac{1}{2}$	7.50/16	4865	$8-3\frac{1}{2}x4\frac{1}{2}$	39.2	346.0	140-3400	266-1700	6.70	CI	170	1000	14.05	34.8	.405	39.7	3096	L	1.88	45
Cadillac-Sixteen ... 38-90	141	$60\frac{1}{2}$	$62\frac{1}{2}$	7.50/16	.....	$16-3\frac{1}{4}x3\frac{1}{4}$	67.6	431.0	185-3600	324-1700	6.80	CI	180	1000	.....	.....	.430	.....	2914	L	1.50	45
Chevrolet-Master ... HB	$112\frac{1}{4}$	$56\frac{3}{8}$	59	6.00/16	2840	$6-3\frac{1}{2}x3\frac{3}{4}$	29.4	216.5	85-3200	170-(b)	6.25	CI	.....	.....	13.15	33.5	.394	35.7	2760	I	1.64	30
Chevrolet-Master De L. ... HA	$112\frac{1}{4}$	$57\frac{1}{4}$	59	6.00/16	2915	$6-3\frac{1}{2}x3\frac{3}{4}$	29.4	216.5	85-3200	170-(b)	6.25	CI	.....	.....	13.53	34.5	.394	39.7	3142	I	1.64	30
Chrysler-Royal ... C-18	119	$56\frac{5}{8}$	$60\frac{9}{32}$	6.25/16	3170	$6-3\frac{3}{8}x4\frac{1}{2}$	27.3	241.5	95-3600	180-1200	6.20	CI	145	1000	13.15	33.4	.368	39.3	2993	L	1.65	45
Chrysler-Imperial ... C-19	125	$57\frac{3}{32}$	$60\frac{29}{32}$	6.50/16	3565	$8-3\frac{1}{4}x4\frac{1}{2}$	33.8	298.6	110-3400	214-1600	6.20	CI	145	1000	13.20	33.3	.368	39.5	2835	L	1.46	45
Chrysler-Cust. Imp. ... C-20	144	58	63	7.50/16	4495	$8-3\frac{1}{4}x4\frac{7}{8}$	33.8	323.5	130-3400	155-1000	6.50	CI	155	1000	13.89	34.6	.402	39.6	3076	L	1.46	45
De Soto ... S-5	119	$56\frac{5}{8}$	$60\frac{9}{32}$	6.00/16	3134	$6-3\frac{3}{8}x4\frac{1}{4}$	27.3	228.1	93-3600	172-1200	6.50	CI	145	1000	13.70	33.7	.407	37.8	3042	L	1.65	45
Dodge ... D-8	115	$55\frac{15}{16}$	$60\frac{1}{4}$	6.00/16	2977	$6-3\frac{1}{4}x4\frac{3}{8}$	25.3	217.8	87-3600	155-1200	6.50	CI	140	1000	13.65	34.2	.400	38.0	3042	L	1.46	45
Ford-V8 ... 60	112	$55\frac{15}{32}$	$58\frac{1}{4}$	5.50/16	2579	8-2.6x3.2	21.6	136.0	60-4200	94-2500	6.60	CI	150	2800	18.96	43.0	.441	30.0	3414	L	1.28	45
Ford-V8 ... 85	112	$55\frac{15}{32}$	$58\frac{1}{4}$	6.00/16	2800	$8-3\frac{1}{16}x3\frac{3}{4}$	30.0	221.0	85-3800	149-2000	6.12	CI	100	Crs	12.67	32.9	.384	37.5	2805	L	1.53	45
Graham ... Std. & Spec.	120	$56\frac{13}{32}$	$61\frac{1}{4}$	6.25/16	3275	$6-3\frac{1}{4}x4\frac{3}{8}$	25.3	217.8	90-3600	165-1600	6.70	Al	160	1000	15.03	36.4	.414	35.3	3117	L	1.51	30
Graham ... S.C. & Cust. S.C.	120	$56\frac{13}{32}$	$61\frac{1}{4}$	6.25/16	3375	$6-3\frac{1}{4}x4\frac{3}{8}$	25.3	217.8	116-4000	180-3000	6.70	Al	120	Crs	15.50	29.1	.534	.....	3117	L	1.51	30
Hudson ... 112	112	56	$59\frac{1}{2}$	5.50/16	2780	$6-3x4\frac{1}{8}$	21.6	175.0	83-4000	135-1400	6.50	CI	115	125	15.88	33.4	.474	33.5	3160	L	1.37	45
Hudson-Terraplane ... 81	117	56	59	6.00/16	2885	6-3x5	21.6	212.0	96-3900	168-1200	6.25	CI	120	125	13.60	30.1	.452	38.0	3168	L	1.37	45
Hudson-Terraplane ... 82	117	56	59	6.00/16	2925	6-3x5	21.6	212.0	101-4000	168-1200	6.25	CI	120	125	13.80	29.0	.477	37.5	3050	L	1.37	45
Hudson-Six ... 83	122	56	59	6.00/16	3005	6-3x5	21.6	212.0	101-4000	168-1200	6.25	CI	120	125	14.15	29.7	.477	36.7	3050	L	1.37	45
Hudson-Eight ... 84-5-7	122,129	56	59	6.50/16	3155	$8-3x4\frac{1}{2}$	28.8	254.5	122-4200	198-1600	6.25	CI	118	125	12.40	25.9	.480	41.2	2980	L	1.50	45
Hupmobile-Six ... E	122	$59\frac{3}{8}$	$58\frac{1}{4}$	6.25/16	3320	$6-3\frac{1}{2}x4\frac{1}{4}$	29.4	245.3	101-3600	141-3000	5.75	CI	141	3000	13.75	33.3	.412	42.2	3314	L	1.65	45
Hupmobile-Eight ... H	125	$60\frac{1}{4}$	$60\frac{9}{16}$	6.50/16	3955	$8-3\frac{3}{16}x4\frac{3}{4}$	32.5	303.2	120-3600	142-2000	5.80	CI	142	2000	13.20	33.3	.396	44.5	3291	L	1.53	45
La Salle-V8 ... 38-50	124	58	59	7.00/16	3830	$8-3\frac{3}{8}x4\frac{1}{2}$	36.4	322.0	125-3400	234-1800	6.25	CI	155	1000	11.88	30.6	.399	40.7	2740	L	1.88	45
Lincoln ... V-12	136,145	60	60	7.50/17	5735	$12-3\frac{1}{8}x4\frac{1}{2}$	46.8	414.0	150-3400	312-1200	6.38	Al	138	1000	13.85	38.2	.362	34.3	2981	L	1.68	45
Lincoln-Zephyr ...	125	$55\frac{15}{32}$	$58\frac{1}{4}$	7.00/16	3560	$12-2\frac{3}{4}x3\frac{3}{4}$	36.3	267.3	110-3900	186-2000	6.70	Al	146	1000	13.31	32.4	.411	40.8	3104	L	1.53	45
Nash-Lafayette ... 3810	117	58	$60\frac{1}{4}$	6.00/16	3200	$6-3\frac{3}{8}x4\frac{3}{8}$	27.3	234.8	95-3400	175-1000	5.83	CI	125	350	13.63	33.7	.404	38.4	3050	L	1.65	45
Nash-Amb. Six ... 3820	121	58	$60\frac{1}{4}$	6.25/16	3460	$6-3\frac{3}{8}x4\frac{3}{8}$	27.3	234.8	105-3400	190-1050	6.00	CI	125	350	14.73	33.0	.447	35.5	3000	I	1.75	45
Nash-Amb. Eight ... 3880	125	58	$61\frac{3}{8}$	7.00/16	3790	$8-3\frac{1}{8}x4\frac{1}{4}$	31.2	260.8	115-3400	200-1200	6.00	CI	110	350	14.53	33.0	.440	35.0	2873	I	1.66	45
Oldsmobile-Six ... F-38	117	58	59	6.50/16	3285	$6-3\frac{7}{16}x4\frac{1}{8}$	28.4	229.7	95-3400	180-1600	6.10	CI	146	1000	14.32	34.6	.413	38.4	3168	L	1.56	30
Oldsmobile-Eight ... L-38	124	58	59	7.00/16	3490	$8-3\frac{1}{4}x3\frac{7}{8}$	33.8	257.1	110-3600	200-1800	6.20	CI	152	1000	13.59	31.7	.428	41.7	3229	L	1.56	30
Packard-Six ... 1600	122	$59\frac{3}{16}$	60	6.50/16	3525	$6-3\frac{1}{2}x4\frac{1}{4}$	29.4	245.3	100-3600	195-1400	6.52	CI	110	Crs	14.40	35.3	.408	40.0	3292	L	1.57	30
Packard-Eight ... 1601-2	127,148	$59\frac{3}{16}$	60	7.00/16	3650	$8-3\frac{1}{4}x4\frac{1}{4}$	33.8	282.0	120-3800	225-2000	6.60	Al	110	Crs	12.93	30.4	.425	41.4	3048	L	1.53	30
Packard-Super Eight ... 1603-4-5	127,34,39	$59\frac{1}{4}$	61	7.50/16	4670	$8-3\frac{3}{16}x5$	32.5	320.0	130-3200	260-1600	6.50	Al	110	Crs	14.14	34.8	.407	40.0	3170	L	1.65	45
Packard-Twelve ... 1607-8	134,139	$60\frac{1}{4}$	61	8.25/16	5525	$12-3\frac{7}{16}x4\frac{1}{4}$	56.7	473.0	175-3200	365-1200	6.40	Al	110	Crs	11.68	31.6	.370	45.3	2933	ML	1.64	45
Pierce-Arrow ... 1801	138,147	$59\frac{1}{8}$	$61\frac{1}{2}$	(a)	5675	$8-3\frac{1}{2}x5$	39.2	385.0	150-3400	300-1600	6.40	Al	148	2500	14.72	37.8	.390	37.6	3087	L	1.56	45
Pierce-Arrow ... 1802	138,144	$59\frac{1}{8}$	$61\frac{1}{2}$	7.50/17	5920	$12-3\frac{1}{2}x4$	58.8	462.0	185-3400	350-1500	6.40	Al	140	2500	12.80	32.0	.401	42.0	2982	L	1.65	45
Pierce-Arrow ... 1803	147	$59\frac{1}{8}$	$61\frac{1}{2}$	7.50/17	6125	$12-3\frac{1}{2}x4$	58.8	462.0	185-3400	350-1500	6.40	Al	140	2500	13.25	33.1	.401	40.7	2982	L	1.65	45
Plymouth ... P-5	112	$55\frac{29}{32}$	$59\frac{15}{16}$	5.50/16	2774	$6-3\frac{1}{8}x4\frac{3}{8}$	23.4	201.3	82-3600	145-1200	6.70	CI	145	1000	13.80	33.7	.408	36.6	2999	L	1.46	45
Plymouth ... P-6	112	$55\frac{29}{32}$	$59\frac{15}{16}$	6.00/16	2834	$6-3\frac{1}{8}x4\frac{3}{8}$	23.4	201.3	82-3600	145-1200	6.70	CI	145	1000	14.20	34.7	.408	36.2	3042	L	1.46	45
Pontiac-Six ... 38-26DA	117	$58\frac{3}{8}$	59	6.00/16	3285	$6-3\frac{7}{16}x4$	28.3	222.7	85-3520	161-1600	6.20	CI	141	1000	14.75	38.6	.382	37.4	3242	L	1.59	30
Pontiac-Eight ... 38-28DA	112	$58\frac{3}{8}$	59	6.50/16	3420	$8-3\frac{1}{4}x3\frac{3}{4}$	33.8	248.9	100-3700	172-1600	6.20	CI	141	1000	13.75	34.2	.402	40.0	3168	L	1.46	30
Studebaker-Six & Com., ... 7A-8A	$116\frac{1}{2}$	$59\frac{1}{2}$	$59\frac{1}{2}$	6.00/16	3190	$6-3\frac{5}{16}x4\frac{3}{8}$	26.3	226.0	90-3400	174-1200	6.00	CI	105	150	14.15	35.6	.398	41.2	3376	L	1.46	45
Studebaker-President ... 4C	122	$59\frac{1}{2}$	$59\frac{1}{2}$	6.50/16	3455	$8-3\frac{1}{16}x4\frac{1}{4}$	30.0	250.4	110-3600	195-2000	6.00	CI	105	150	13.80	31.4	.440	41.6	3299	L	1.40	45
Willys ... 38	100	55	56	5.50/16	2300	$4-3\frac{1}{8}x4\frac{3}{8}$	15.6	134.2	48-3200	100-1600	5.70	CI	87	216	17.30	48.0	.358	31.6	3307	L	1.53	45

ABBREVIATIONS

†—Computed on basis all tires are of same make, specified plies and standard rear axle
††—Computed on basis of displacement, rear axle ratio, effective tire diameter and shipping weight with normal load
½—Semi-floating
¾—Three-quarter floating

(a)—138 in.-7.00/17; 147 in.-7.50/17
A—The Electric Auto-Lite Company
AA—Aluminum, Autothermic
AC—AC Spark Plug Co.
Al—Aluminum
Ala—Aluminum, Anodized Finish
Als—Aluminum with Struts
At—Aluminum, Tin Plated
Ats—Aluminum, Tin Plated, with Struts

(b)—900-2000 R.P.M.
BVE—Bendix, vacuum and electric shift, lever on steering column
(c)—$1\text{-}\frac{1}{8}$, $1\text{-}\frac{3}{32}$
C—Conventional Axle
Car—Carter Carburetor Corp.
CD—Continental Diamond Fiber Co.
CG—Chandler-Groves Co.
Ch—Chain
Ch—Champion Spark Plug Co.

Con—Conventional
Crs—Cranking speed
CS—Cast Steel
CT—Cast Iron, Tin Plated
(d)—$1\text{-}\frac{1}{8}$, $1\text{-}\frac{3}{16}$
D—Delco-Remy Div.
Del—Delco
(e)—Upper $\frac{3}{16}$, Lower $\frac{5}{32}$
EV—Evans vacuum shift, lever on instrument panel

American Passenger Car Engine Trends

(Based on Number of Models Offered)

Hp. per cu. in. of Displacement

1927	.256
1928	.276
1929	.306
1930	.331
1931	.344
1932	.353
1933	.376
1934	.388
1935	.398
1936	.411
1937	.417
1938	.412

Average Compression Ratio

1927	4.55
1928	4.86
1929	4.99
1930	5.15
1931	5.23
1932	5.29
1933	5.57
1934	5.72
1935	5.98
1936	6.14
1937	6.25
1938	6.32

Average B.M.E.P.

At Maximum Hp. (Lb. per Sq. In.)

1927	74.5
1928	76.2
1929	80.6
1930	82.7
1931	84.3
1932	86.2
1933	88.5
1934	90.1
1935	90.2
1936	92.3
1937	93.1
1938	91.2

Bore, Stroke, Displacement

	Bore (Inches)	Stroke (Inches)	Piston Displ. (Cu. In.)
1927	3.26	4.67	254.9
1928	3.27	4.58	257.7
1929	3.27	4.57	261.3
1930	3.26	4.51	264.6
1931	3.21	4.45	273.0
1932	3.26	4.41	283.9
1933	3.23	4.40	284.1
1934	3.24	4.40	289.2
1935	3.23	4.39	271.4
1936	3.39	4.32	267.9
1937	3.25	4.31	277.6
1938	3.25	4.27	271.1

For additional trends see pages 280 and 281

CAR ENGINES—1938

VALVES Exhaust Head Diam.	VALVES Exhaust Seat Angle	PISTONS Material	PISTONS Weight (Oz.) without Rings, Pin or Bushing	PISTONS Pin Diameter	PISTONS Pin Locked In—	RINGS No. and Width Compression	RINGS No. and Width Oil	Camshaft Drive, Make and Type	Crankshaft Counterbalanced	Vibration Damper	No. of Main Bearings	Crankpin Diameter (In.)	Crankpin Length (In.)	Carburetor—Make and Size	Transmission—Shifting Mechanism	Spark Plug—Make and Model	Electrical System—Make	Battery—Make	REAR AXLE Type	REAR AXLE Final Drive	REAR AXLE Torque Medium	REAR AXLE Gear Ratio	Front Wheel Suspension	CAR MAKE AND MODEL
1.03	30	Ats	......	39/64	R	2-3/32	1-⅛	Own..ge	Y	N	2	1 5/16	1¼	Til... ¾	Con	A.....A9	A	Wil	½	SB	Sp	5.87	Tr	Bantam.....60
1.34	45	Ala	14.56	11/16	R	2-(c)	2-3/16	LB...ch	Y	Y	5	2	1.21	SM..1	FA	AC....46	D	Del	½	Hyp	TT	4.40	IC	Buick-Special.....38-40
1.43	45	Ala	17.71	.874	R	2-(c)	2-3/16	LB...ch	Y	Y	5	2¼	1.30	SM..1¼	Con	AC....46	D	Del	½	Hyp	TT	3.90	IC	Buick-Century.....38-60
1.43	45	Ala	17.71	.874	R	2-(c)	2-3/16	LB...ch	Y	Y	5	2¼	1.30	SM..1¼	Con	AC....46	D	Del	½	Hyp	TT	4.18	IC	Buick-Roadmaster.....38-80
1.43	45	Ala	17.71	.874	R	2-(c)	2-3/16	LB...ch	Y	Y	5	2¼	1.30	SM..1¼	Con	AC....46	D	Del	½	Hyp	TT	4.55	IC	Buick-Limited.....38-90
1.63	45	Ala	18.30	⅞	F	2-⅛	2-5/32	Mor..ch	Y	Y	3	2.46	2 1/32	SM..1¼	SC	AC....45	D	Del	½	Hyp	Sp	3.92	IC	Cadillac-V8.....38-60
1.63	45	Ala	18.30	⅞	F	2-⅛	2-5/32	Mor..ch	Y	Y	3	2.46	2 1/32	Str..1¼	SC	AC....45	D	Del	½	Hyp	Sp	4.58	IC	Cadillac-V8.....38-60 S
1.63	45	Ala	18.30	⅞	F	2-⅛	2-5/32	Mor..ch	Y	Y	3	2.46	2 1/32	Str..1¼	SC	AC....45	D	Del	½	Hyp	Sp	4.58	IC	Cadillac-V8.....38-65
1.63	45	Ala	18.30	⅞	F	2-⅛	2-5/32	Mor..ch	Y	Y	3	2.46	2 1/32	Str..1¼	SC	AC....45	D	Del	½	Hyp	Sp	4.58	IC	Cadillac-V8.....38-75
1.37	45	Ala	15.28	13/16	R	2-(c)	1-3/16	Mor..ch	Y	Y	9	2	1¾	Car..1⅛	SC	AC....45	D	Del	½	Hyp	Sp	4.31	IC	Cadillac-Sixteen.....38-90
1.46	30	CT	22.70	.864	R	2-.123	1-.186	Own..ge	Y	Y	4	2 5/16	1½	Car..1¼	Con	AC....46	D	Del	½	Hyp	TT	3.72	C	Chevrolet-Master.....HB
1.46	30	CT	22.70	.864	R	2-.123	1-.186	Own..ge	Y	Y	4	2 5/16	1½	Car..1¼	Con	AC....46	D	Del	½	Hyp	TT	4.22	IC	Chevrolet-Master De L.....HA
1.53	45	Ala	......	55/64	F	2-⅛	2-5/32	Mor..ch	Y	Y	4	2⅛	1 7/32	Car..1½	Con	Ch.....J8	A	Wil	½	Hyp	Sp	4.10	IC	Chrysler-Royal.....C-18
1.40	45	Ala	......	55/64	F	2-⅛	2-5/32	Mor..ch	Y	Y	5	2 3/16	1⅛	Str...1¼	Con	Ch.....J8	A	Wil	½	Hyp	Sp	3.91	IC	Chrysler-Imperial.....C-19
1.40	45	Ala	......	55/64	F	2-⅛	2-5/32	Mor..ch	Y	Y	5	2 3/16	1⅛	Str...1¼	Con	Ch...H10	A	Wil	½	Hyp	Sp	4.55	IC	Chrysler-Cust. Imp.....C-20
1.53	45	Ala	......	55/64	F	2-⅛	2-5/32	Mor..ch	Y	Y	4	2⅛	1 7/32	Car..1½	Con	A.....A7	A	Wil	½	Hyp	Sp	4.10	IC	De Soto.....S-5
1.46	45	Als	......	55/64	F	2-⅛	2-5/32	Mor..ch	Y	Y	4	2 1/16	1	Str...1¼	Con	Ch.....J8	A	Wil	½	Hyp	Sp	4.10	C	Dodge.....D-8
1.28	45	CS	8.11	11/16	F	2-.091	1-.154	Own..ge	Y	Y	3	1.60	1.54	Str....78	Con	Ch...H10	O	Own	¾	SB	TT	4.44	Tr	Ford-V8.....60
1.53	45	CS	10.68	¾	F	2-.092	1-.154	Own..ge	Y	Y	3	2	1.93	Str....94	Con	Ch......7	O	Own	¾	SB	TT	3.78	Tr	Ford-V8.....85
1.32	45	AT	14.12	13/16	R	2-3/32	2-(e)	LB....ch	Y	Y	4	2 1/16	1 5/16	Mar..1½	EV	Ch.....J9	D	Wil	½	Hyp	Sp	4.27	C	Graham.....Std. & Spec.
1.32	45	AT	14.12	13/16	R	2-3/32	2-(e)	LB....ch	Y	Y	4	2 1/16	1 5/16	Mar..1½	EV	Ch.....J9	D	Wil	½	Hyp	Sp	4.27	C	Graham.....S.C. & Cust. S.C.
1.37	45	Al	10.50	¾	F	2-3/32	2-3/16	GD...ge	Y	Y	3	1.93	1.37	Car..1⅛	Con	Ch.....J8	A	Nat	½	SB	Sp	4.11	C	Hudson.....112
1.37	45	Al	10.50	¾	F	2-3/32	2-3/16	GD...ge	Y	Y	3	1.93	1.39	Car..1¼	BVE	Ch...J8-A	A	Nat	½	SB	Sp	4.11	C	Hudson-Terraplane.....81
1.37	45	Al	10.50	¾	F	2-3/32	2-3/16	GD...ge	Y	Y	3	1.93	1.39	Car..1	BVE	Ch...J8-A	A	Nat	½	SB	Sp	4.11	C	Hudson-Terraplane.....82
1.37	45	Al	10.50	¾	F	2-3/32	2-3/16	GD...ge	Y	Y	3	1.93	1.39	Car..1	BVE	Ch...J8-A	A	Nat	½	SB	Sp	4.11	C	Hudson-Six.....83
1.37	45	Al	10.80	¾	F	2-3/32	2-3/16	GD...ge	Y	Y	5	1.93	1.37	Car..1	BVE	Ch...J8-A	A	Nat	½	SB	Sp	4.11	C	Hudson-Eight.....84-5-7
1.53	45	Als	......	⅞	....	2-5/32	2-⅛	Mor...ch	Y	Y	4	2⅛	1¼	Car..1¼	Con	Ch......7	A	Wil	½	SB	Sp	4.54	C	Hupmobile-Six.....E
1.53	45	Als	......	⅞	....	2-5/32	2-⅛	Mor...ch	Y	Y	5	2⅜	1¼	Car..1	Con	Ch......7	A	Wil	½	Hyp	Sp	4.54	C	Hupmobile-Eight.....H
1.63	45	Als	16.88	⅞	F	2-⅛	2-5/32	Mor...ch	Y	N	3	2.46	2 1/32	Car..1⅛	SC	AC....45	D	Del	½	Hyp	Sp	3.92	IC	La Salle-V8.....38-50
1.68	45	Al	12.50	⅞	P	2-.123	2-.154	Own..ch	Y	Y	4	2½	2	Str...1 7/16	Con	Ch......7	A	Exi	FF	SB	TT	4.58	C	Lincoln.....V-12
1.53	45	CS	11.50	¾	F	2-.093	1-.186	Own..ge	Y	Y	4	2.12	1.57	CG.. 31/32	Con	Ch...H10	O	Own	¾	Hyp	Sp	4.44	Tr	Lincoln-Zephyr.....
1.53	45	Als	19.12	⅞	F	2-⅛	2-5/32	Whi...ch	Y	Y	7	2	1.42	Str...1¼	EV	A.....B7	A	USL	½	SB	Sp	4.11	C	Nash-Lafayette.....3810
1.59	45	Als	19.50	⅞	F	2-⅛	2-5/32	Whi...ch	Y	Y	7	2	1.42	Mar..1½	EV	AC....45	A	USL	½	SB	Sp	4.11	C	Nash-Amb. Six.....3820
1.46	45	Als	16.00	⅞	F	2-⅛	2-(d)	CD...ge	N	Y	9	2	1.23	Str...1	EV	AC....45	A	USL	½	SB	Sp	4.11	C	Nash-Amb. Eight.....3880
1.42	45	Ala	17.00	55/64	P	2-⅛	2-3/16	Whi...ch	Y	Y	4	2⅛	1⅜	Car..1¼	FA	AC....45	D	Del	½	SB	Sp	4.37	IC	Oldsmobile-Six.....F-38
1.42	45	Ala	16.04	55/64	P	2-⅛	2-3/16	LB....ch	Y	Y	5	2⅛	1⅜	Car..1	FA	AC....45	D	Del	½	SB	Sp	4.37	IC	Oldsmobile-Eight.....L-38
1.40	45	AA	19.50	⅞	F	2-.124	1-.186	Mor..ch	Y	Y	4	2 3/32	1¼	CG..1¼	Con	AC.103(f)	D	Wil	½	Hyp	Sp	4.54	IC	Packard-Six.....1600
1.40	45	AA	16.87	⅞	F	2-.124	1-.186	Mor..ch	Y	Y	5	2 3/32	1¼	Str...1	Con	AC.103(f)	A	PD	½	Hyp	Sp	(h)	IC	Packard-Eight.....1601-2
1.46	45	AA	17.75	⅞	F	2-.123	2-.155	Mor..ch	Y	Y	9	2 3/16	1 3/32	Str...1¼	Con	AC.103(f)	A	PD	½	Hyp	Sp	4.69	IC	Packard-Super Eight.....1603-4-5
1.65	45	AA	20.00	⅞	F	2-.123	1-.155	Mor..ch	Y	Y	4	2½	1⅛	Str...1½	Con	AC.103(f)	A	PD	½	Hyp	Sp	4.41	IC	Packard-Twelve.....1607-8
1.56	45	Ala	......	⅞	F	2-.123	2-.154	Whi...ch	Y	Y	9	2¼	1¼	Str...1½	Con	Ch.....J6	D(g)	Wil	½	Hyp	Sp	4.58	C	Pierce-Arrow.....1801
1.56	45	Ala	......	⅞	F	2-.123	2-.154	Whi...ch	Y	Y	7	2.12	1.12	Str...1½	Con	Ch.....J6	D(g)	Wil	½	Hyp	Sp	4.58	C	Pierce-Arrow.....1802
1.56	45	Ala	......	⅞	F	2-.123	2-.154	Whi...ch	Y	Y	7	2.12	1.12	Str...1½	Con	Ch.....J6	D(g)	Wil	½	Hyp	Sp	4.58	C	Pierce-Arrow.....1803
1.46	45	Ala	......	55/64	F	2-⅛	2-5/32	Mor..ch	Y	N	4	1 15/16	1	GC..1¼	Con	Ch.....J8	A	Wil	½	Hyp	Sp	3.90	C	Plymouth.....P-5
1.46	45	Ala	......	55/64	F	2-⅛	2-5/32	Mor..ch	Y	N	4	1 15/16	1	Car..1¼	Con	A.....A7	A	Wil	½	Hyp	Sp	4.10	C	Plymouth.....P-6
1.46	45	NT	26.68	15/16	P	2-.123	1-.186	Mor..ch	Y	Y	4	2	1 5/16	Car..1¼	SC	AC....45	D	Del	½	SB	Sp	4.37	IC	Pontiac-Six.....38-26DA
1.34	45	NT	24.25	15/16	P	2-.123	1-.186	Mor..ch	Y	Y	5	2	1 1/16	Car..1 5/16	SC	AC....45	D	Del	½	SB	Sp	4.37	IC	Pontiac-Eight.....38-28DA
1.28	45	Al	......	⅞	R	2-⅛	1-3/16	CD...ge	Y	Y	4	2 3/16	1⅜	Str...1¼	EV	Ch......8	A	Wil	½	Hyp	Sp	4.55	IT	Studebaker-Six & Com.....7A-8A
1.28	45	Al	......	⅞	R	2-⅛	1-3/16	CD...ge	Y	Y	9	1⅞	1 3/16	Str...1	EV	Ch......8	D	Wil	½	Hyp	Sp	4.55	IT	Studebaker-President.....4C
1.46	45	CT	22.00	15/16	F	3-3/32	1-3/16	LB....ch	N	N	3	1 15/16	1 5/16	Til...1⅛	Con	Ch.....C7	A	USL	½	SB	Sp	4.30	C	Willys.....38

Exi—Exide (Electric Storage Battery Co.)
(f)—Or Champion Y-4
F—Floating (Piston Pin)
FA—Full automatic shift, lever on steering column
FF—Full Floating
(g)—Owen-Dyneto, Generator and Starter
GC—Chandler-Groves or Carter
GD—General Electric or Continental Diamond Fiber
ge—Gear **(h)**—1601-4.36, 1602-4.70
Hyp—Hypoid Gear
I—In-Head (valves)
IC—Independent Coil
IT—Independent, Transverse
L—L-Head (valves)
LB—Link-Belt Company
ML—Modified L-Head
Mor—Morse Chain Co.
N—No or None
Nat—National Battery Co.
NT—Chrome Nickel Iron, Tin Plated
O—Own **P**—Locked in Piston
PD—Presto-O-Lite or Delco
R—Locked in Rod
SB—Spiral Bevel
SC—On Steering Column
SM—Stromberg or Marvel
Sp—Through Springs
Str—Stromberg Carburetor Div.
Til—Tillotson Mfg. Co.
Tr—Transverse
TT—Through Torque Tube
USL—USL Battery Corp.
Whi—Whitney Mfg. Co.
Wil—Willard Storage Battery Co.
Y—Yes

American Passenger Car Engine Trends

(Based on Number of Models Offered)

Average Piston Speeds (Feet per Min.)

1927	2150
1928	2210
1929	2310
1930	2380
1931	2395
1932	2390
1933	2463
1934	2508
1935	2535
1936	2498
1937	2554
1938	2545

Displacement per Cylinder (Cu. In.)

1927	39.5
1928	39.1
1929	38.9
1930	37.6
1931	36.8
1922	36.7
1933	36.0
1934	36.2
1935	36.1
1936	35.6
1937	35.8
1938	35.7

Average Number of Cylinders

1927	6.45
1928	6.59
1929	6.71
1930	7.04
1931	7.49
1932	7.78
1933	7.88
1934	7.97
1935	7.51
1936	7.50
1937	7.74
1938	7.60

Average R.P.M.

1927	2740
1928	2860
1929	3063
1930	3170
1931	3230
1932	3250
1933	3360
1934	3420
1935	3480
1936	3487
1937	3556
1938	3576

Average Brake Horsepower

1927	65.8
1928	70.9
1929	81.6
1930	87.6
1931	95.0
1932	101.0
1933	106.5
1934	112.5
1935	109.6
1936	110.1
1937	115.9
1938	111.7

For additional trends see pages 280 and 281

MECHANICAL SPECIFICATIONS OF

BRITISH

MAKE AND MODEL	ENGINE										GENERAL				FUEL SYSTEM			TRANS-MISSION				REAR AXLE							
	Number of Cylinders Bore and Stroke (In.)	Maximum Brake Hp. at Specified R.P.M.	Piston Displacement (Cu. In.)	Compression Ratio (To 1)	Cylinder Arrangement	No. of Main Bearings	Valve Location	Crankcase Type	Piston Material	Camshaft Drive	Wheelbase (In.)	Tread—Rear (In.)	Tires (In. or Metric)	Oil pressure to—	No. Used and Type of Carburetor	Supercharged	Clutch Type	Location	Type	No. of Forward Speeds	Synchronizing Clutches	Final Drive	Gear Ratio (To 1)	Torque taken by	Drive on	Independent Suspension	Service Brakes	Servo Unit Fitted	Chassis Weight (Lb.)
A.C. (Acedes)............16/60	6-2.56x3.94	66-4250	121.5	6.50	I	5	I	Se	Al	C	119.0	53	5.50/18	abce	3-....	N	SP	U	Hs	4	Y	SB	4.66°	sp	R	N	M	N	1596
A.C. (Acedes)............16/70	6-2.56x3.94	66-4250	121.5	7.00	I	5	I	Se	Al	C	119.0	53	5.50/18	abce	3-....	N	SP	U	Hs	4	Y	SB	4.75°	sp	R	N	M	..	1708
A.C. (Acedes)............16/80	6-2.56x3.94	82-4250	121.5	7.50	I	5	I	Se	Al	C	106.0	50	5.00/19	abce	3-....	Y†	SP	U	Ps†	4	Y	SB	4.25°	sp	R	N	M	N	1559
Alvis............SB-13.22	4-2.87x4.33	64-....	112.4	6.30	I	3	I	In	Al	C	106.0	50	5.50/17	ac	1-Do	N	SP	U	Hs	4	Y	SB	5.00	sp	R	N	M	N	1904
Alvis......Silver Crest-TF-16.95	6-2.66x4.33	68-3800	144.1	6.20	I	4	I	In	Al	C	120.0	56	6.50/16	ac	3-Ho	N	SP	U	Hs	4	Y	Hy	5.22	sp	R	F	M	N	2576
Alvis......Silver Crest-TH-19.82	6-2.87x4.33	91-4250	168.5	6.48	I	4	I	In	Al	C	120.0	56	6.50/16	ac	3-Ho	N	SP	U	Hs	4	Y	Hy	4.54	sp	R	F	M	N	2576
Alvis-Crested Eagle-20-TK-19.82	6-2.87x4.33	87-4250	168.5	6.20	I	4	I	Se	Als	C	128.0°	56	6.00/19	ac	3-Ho	N	SP	S	Hs	4	Y	SB	5.22	sp	R	F	M	N	2688°
Alvis-Crested Eagle-25-TD-25.63	6-3.27x4.33	102-3600	217.8	6.35	I	7	I	Se	Al	C	123.0°	56	6.00/19	ac	3-Ho	N	SP	S	Hs	4	Y	SB	4.55	sp	R	F	M	Y	2688°
Alvis-Speed 25.........SC-25.63	6-3.27x4.33	110-3800	217.8	6.35	I	7	I	Se	Al	C	124.0	56	5.50/19	ac	3-Ho	N	SP	S	Hs	4	Y	SB	4.11	sp	R	F	M	Y	2674
Alvis-4.3 Litre..........SC-31.48	6-3.62x4.33	123-3600	267.6	6.25	I	7	I	Se	Al	C	124.0°	56	5.50/19	ac	3-Ho	N	SP	S	Hs	4	Y	SB	3.81°	sp	R	F	M	Y	2688°
Armstrong Siddeley.......14-HP	6-2.40x3.75	45-4000	101.8	6.00	I	4	I	In	Als	C	108.0	54	5.00/17	abce	1-Do	N	SC	U	Ps	4	N	SB	5.33	tt	R	..	M	N	1788
Armstrong Siddeley.......17-HP	6-2.62x4.49	60-3000	146.1	5.75	I	4	I	In	Als	C	116.0°	57	5.50/17°	abce	1-Do	N	SC	U	Ps	4	N	SB	5.10°	sp	R	F	M	N	2386°
Armstrong Siddeley.......25-HP	6-3.25x4.49	85-3500	224.0	5.75	I	4	I	In	Als	C	123.0°	57	6.00/17	abce	1-Do	N	SC	U	Ps	4	N	SB	4.36°	sp	R	F	M	N	2940°
Aston Martin-Long Chassis-15/98	4-3.07x4.02	90-5000	118.9	7.75	I	3	I	In	Al	C	116.0°	54½	5.25/17°	abce	2-Ho	...	SP	U	Hs	4	Y	SB	4.67	sp	R	F	M	N	2156°
Aston Martin......Speed Model	4-3.07x4.02	110-5500	118.9	8.20	I	3	I	In	Al	C	102.0	54½	5.25/18	abde	2-....	...	SP	U	Hs	4	N	SB	4.44	sp	R	F	H	N	2000
Austin..................7-HP	4-2.20x3.00	17-3900	45.6	6.00	I	3	L	Se	Al	H	81.0	43	4.00/17	ab	1-Ho	N	SP	U	Hs	4	Y	SB	5.25	tt	R	F	M	N	770
Austin...............Big Seven	4-2.24x3.50	25-4000	54.9	6.25	I	3	L	In	Al	C	87.5	45	4.75/16	abce	1-Do	N	SP	U	Hs	4	Y	SB	5.12	tt	R	F	M	N	910
Austin..................10-HP	4-2.50x3.50	27-4000	68.7	5.75	I	3	L	In	Al	C	93.7	46½	5.25/16	abce	1-Do	N	SP	U	Hs	4	Y	SB	5.25	sp	R	F	M	N	1232
Austin..............Light 12/4	4-2.73x4.00	33-3600	93.6	5.47	I	3	L	In	Al	C	106.2	53⅜	5.75/16	abce	1-Do	N	SP	U	Hs	4	Y	SB	4.89	sp	R	F	M	N	1526
Austin...............Fourteen	6-2.58x3.33	38-3400	104.4	5.71	I	4	L	In	Al	C	111.7	53⅜	5.75/16	abce	1-Do	N	SP	U	Hs	4	Y	SB	5.37	sp	R	F	M	N	1617
Austin..................18-HP	6-2.73x4.37	57-3600	153.7	6.15	I	4	L	In	Al	C	112.5°	58½	6.50/16	abce	1-Do	N	SP	U	Hs	4	Y	SB	5.11	sp	R	F	M	N	2184°
Austin..................20-HP	6-3.12x4.50	66-3000	207.0	5.45	I	8	L	Se	Al	C	136.0	57½	6.50/17	abce	1-Do	N	SP	U	Hs	4	Y	SB	4.67	sp	R	F	M	N	2765
Bentley..............4¼ Litre	6-3.50x4.50	....	260.0	6.00	I	7	I	Se	Al	...	126.0	56.6	5.50/18	ac	2-Up	N	SP	Se	Hs	4	Y	Hy	4.11	sp	R	N	M	Y	2548
Daimler.....................15	6-2.59x4.15	55-3600	132.1	6.50	I	4	I	In	Al	C	114.0	52	6.00/16	abce	1-Ho	N	H	U	Pp	4	Y	Wo	4.86	sp	R	F	M	N	2240
Daimler...................E-20	6-2.83x4.13	62-3600	156.5	6.00	I	4	I	Se	Al	C	114.0	56	6.00/18	abce	1-Ho	N	H	U	Pp	4	Y	Wo	5.14	sp	R	N	M	Y	2350
Daimler..................EL-24	6-3.15x4.33	75-3600	202.4	6.00	I	7	I	In	Al	C	124.0	57	6.50/17	abce	1-Ho	...	H	U	Pp	4	Y	Wo	4.86	sp	R	N	M	Y	2970
Daimler..................E-3½	8-2.83x4.13	95-3600	208.7	6.00	I	5	I	Se	Al	C	123.0	57	6.50/17	abce	1-Dd	N	H	U	Pp	4	Y	Wo	4.86	sp	R	N	M	Y	2825
Daimler..................V-4½	8-3.15x4.53	103-3400	282.0	6.00	I	9	I	In	Al	C	142.0	57	7.00/18	abce	1-Dd	N	H	S	Pp	4	Y	Wo	4.38	sp	R	N	M	Y	3584
Ford.....................8-HP	4-2.23x3.64	23.4-4000	56.9	6.20°	I	3	L	Se	Al	H	90.0	45	4.50/17	abce	1-Do	N	SP	U	Hs	3	N	SB	5.50	tt	R	N	M	N	1210
Ford....................10-HP	4-2.50x3.64	32.5-4300	71.5	6.06	I	3	L	Se	Al	H	94.0	45	4.50/17	abce	1-Do	N	SP	U	Hs	3	N	SB	5.50	tt	R	N	M	N	1232
Ford.................V8-22-HP	8-2.60x3.20	60-4200	136.0	6.60	V	3	L	Se	CS	H	108.2	58	5.75/16	abce	1-Do	N	SP	U	Hs	3	N	SB	4.55	tt	R	N	M	N	1920
Ford...............V-8-30-HP	8-3.06x3.75	85-3800	221.0	6.12°	V	3	L	Se	Al	H	112.0	58.2	6.00/16	abce	1-Do	N	SP	U	Hs	3	N	SB	4.11	tt	R	N	M	N	2110
Hillman...................Minx	4-2.48x3.74	33-4100	72.2	6.15	I	3	L	In	Al	C	92.0	48½	5.25/16	abce	1-Do	N	SP	U	Hs	4	Y	SB	5.44	sp	R	N	M	N	1407
Hillman...................."14"	4-2.95x4.33	51-3600	118.5	6.10	I	3	L	In	Al	C	114.0	56	5.75/16	abce	1-Do	N	SP	U	Hs	4	Y	SB	4.89	sp	R	F	M	N	......
Hillman.................6 Cyl.	6-2.95x4.72	73-3400	194.0	6.00	I	4	L	In	Al	C	126.0	59½	6.50/16	abcde	1-Do	N	SP	U	Hs	4	Y	SB	4.89	sp	R	F	M	N	2751
Humber......................16	6-2.66x4.72	60-3700	157.2	6.50	I	4	L	In	Al	C	114.0	56	6.00/16	abcde	1-Do	N	SP	U	Hs	4	Y	SB	4.89	sp	R	F	M	N	2240
Humber...................Snipe	6-2.95x4.72	78-3300	194.0	6.40	I	4	L	In	Al	C	114.0	56	6.00/16	abcde	1-Do	N	SP	U	Hs	4	Y	SB	4.30	sp	R	F	M	N	2240
Humber.................Pullman	6-3.34x4.72	100-3400	249.2	6.10	I	..	L	In	Al	C	122.0	60¼	7.50/16	abcde	1-Do	N	SP	U	Hs	4	Y	SB	4.30	sp	R	F	M	N	3052
Humber.........Snipe Imperial	6-3.34x4.72	100-3400	249.2	6.10	I	..	L	In	Al	C	124.0	60¼	7.00/16	abcde	1-Do	N	SP	U	Hs	4	Y	SB	4.30	sp	R	F	M	N	2996
Invicta.....................20	6-2.91x4.09	76-4200	164.3	6.80	I	4	I	In	Al	C	126.0	57½	6.00/16	ab	1-Do	...	SP	U	Hs	4	Y	SB	4.45	sp	R	F	M	N	2100
Invicta.....................30	6-3.54x4.09	120-4000	243.9	6.80	I	7	I	In	Al	C	126.0	57½	6.50/16	ab	1-Do	...	SP	U	Hs	4	Y	SB	4.45	sp	R	F	M	..	2200
Jowett......................8G	2-3.03x3.99	17-3750	57.7	4.70	O	2	L	Se	Al	C	102.0	48½	5.00/16	ac	1-Ho	N	SP	U	Hs	4	N	SB	4.89	sp	R	N	M	N	1064
Jowett.......................J	4-2.50x3.62	32-4500	71.2	5.50	O	2	L	Se	Al	C	102.0	48½	5.25/16	ace	1-Do	N	SP	U	Hs	4	Y	SB	4.89	sp	R	N	M	N	1344
Lagonda.................L.G. 6	6-3.48x4.75	140-3800	271.1	6.70	I	4	I	Se	Al	C	127.5°	60	6.00/18	abce	2-Ho	N	SP	S	Hs	4	Y	SB	3.58	sp	R	F	H	N	3020
Lagonda...................V-12	12-2.95x3.32	180-5500	273.3	7.00	V	4	I	In	Al	C	124.0	60	6.50/18	abce	2-Do	N	SP	S	Hs	4	Y	Hy	4.45°	sp	R	F	H	N	3020
Lanchester..................11	4-2.59x4.15	37-4200	88.1	6.25	I	..	I	In	Al	C	102.6	48	5.00/18	abce	1-Ho	N	H	U	Pp	4	..	Wo	5.43	sp	R	N	M	N	1690
Lanchester..................14	6-2.36x3.54	43-4000	93.1	7.00	I	4	I	Se	Al	C	102.6	48	5.00/18	abce	1-Ho	N	H	U	Pp	4	Y	Wo	5.43	sp	R	N	M	N	1680
Lanchester............14 DeL.	6-2.42x3.99	52-4200	110.3	6.50	I	4	I	In	Al	C	110.0	52	5.75/16	abce	1-Ho	N	H	U	Pp°	4	Y	SB	5.00	sp	R	F	M	N	2125
Lanchester................E-18	6-2.83x4.13	62-3600	156.5	6.00	I	4	I	Se	Al	C	114.0	56	5.50/18	abce	1-Ho	N	H	U	Pp	4	Y	Wo	4.86	sp	R	N	M	N	2300
Lea Francis.............12-HP	4-2.72x3.93	50-4800	91.5	6.00	I	3	I	In	Al	C	111.0	51	5.55/17	abce	1-Ho	N	SP	U	Hs	4	Y	SB	5.37	sp	R	N	M	N	1500
Lea Francis.............14-HP	4-2.83x3.93	....	......	6.00	I	3	I	In	Al	C	111.0	51	5.55/17	abce	1-Ho	N	SP	U	Hs	4	Y	SB	5.37	sp	R	N	M	N	1500
MG..............Midget "T"	4-2.50x4.02	....	78.8	6.50	I	3	I	In	Al	C	94.0	45	4.50/19	abce	2-Do	...	SO	U	Hs	4	Y	SB	4.87	sp	R	N	H	N	1422
MG.................1½ Litre	4-2.73x4.02	....	94.4	6.50	I	4	I	In	Al	C	108.0	50	5.00/19	abce	2-Do	...	SO	U	Hs	4	Y	SB	5.22	sp	R	N	H	N	2070
MG...................2 Litre	6-2.73x4.02	....	141.6	6.50	I	4	I	In	Al	C	123.0	53⅜	5.50/18	abce	2-Do	N	SO	U	Hs	4	Y	SB	4.75	sp	R	N	H	N	2436
Morris..............8-Series II	4-2.24x3.54	23-3800	56.7	5.80	I	3	L	In	Al	C	90.0	45	4.50/17	abce	1-Ho	N	SP	U	Hs	3	Y	SB	5.37	sp	R	N	H	N	1070
Morris............10-Series III	4-2.50x4.01	36-4200	78.8	6.00	I	3	I	In	Al	C	100.0	50	5.50/16	abce	1-Ho	N	SO	U	Hs	4	Y	SB	5.25	sp	R	N	H	N	1524
Morris............12-Series III	4-2.73x4.01	39-3800	94.6	6.00	I	3	I	In	Al	C	96.0	50	5.50/16	abce	1-Ho	N	SP	U	Hs	4	Y	SB	5.25	sp	R	N	H	N	1462
Morris............14-Series III	6-2.42x4.01	48-4200	120.9	6.30	I	4	I	In	Al	C	106.0	56	5.75/16	abce	1-Ho	N	SO	U	Hs	4	Y	SB	4.33	sp	R	N	H	N	1904
Morris............25-Series III	6-3.23x4.33	90-3500	209.5	6.00	I	4	I	In	Al	C	121.5	56	7.00/16	abce	1-Ho	N	SO	U	Hs	3	Y	SB	4.45	sp	R	N	H	N	2375
Railton-Hudson..........16-HP	6-2.65x5.00	76-3800	166.1	6.25	I	3	L	In	Al	H	117.0	57½	6.00/16	Splash	1-Do	N	SO	U	Hs	3	N	SB	4.55	sp	R	N	H	N	2044
Railton-Hudson..........29-HP	8-2.99x4.48	124-4200	254.2	6.25	I	5	L	In	Al	H	122.0°	57½	6.25/16	Splash	1-Do	N	SO	U	Hs	3	N	SB	4.10	sp	R	N	H	N	2212
Riley.................1½ Litre	4-2.68x3.93	55-4500	91.3	6.30	I	3	I	In	Al	H	112.5	51	4.75/18	abce	1-Ho	N	SC	U	Ps	4	N	SB	5.22	tt	R	N	M	N	2716
Riley.................1½ Litre	4-2.68x3.93	55-4500	91.3	6.30	I	3	I	In	Al	H	112.5	51	4.75/18	abce	1-Ho	N	SP	U	Hs	3	N	SB	6.75	tt	R	N	M	N	2362°
Riley...................15-HP	6-2.50x3.75	50-4500	105.3	5.80	I	3	I	In	Al	H	116.5	51	4.75/18	abce	1-Ho	N	SC	U	Ps	4	N	SB	5.22	tt	R	N	M	N	2884
Riley.....................V-8	8-2.37x3.75	74-4500	132.8	5.90	V	3	I	In	Al	H	116.5	51	5.25/18	abce	2-Do	N	SC	U	Ps	4	N	SB	5.00	tt	R	N	M	N	3388
Riley...................16-HP	4-3.17x4.71	80-4300	149.0	6.25	I	3	I	In	Al	C	116.0	51¾	5.25/18	abce	1-Do	N	SC	U	Hs	3	N	SB	5.50	tt	R	N	M	N	3276
Rolls-Royce.............25/30	6-3.50x4.50	....	260.0	6.00	I	7	I	Se	Al	H	132.0	56.3	6.00/19	ac	1-Do	N	SP	U	Hs	4	Y	Hy	4.55	sp	R	N	M	Y	2976
Rolls-Royce.............40/50	12-3.25x4.50	....	434.0	6.00	V	7	I	In	Al	H	142.0	62.6	7.00/18	ac	2-Do	N	SP	Se	Hs	4	..	Hy	4.25	sp	R	F	M	Y	4060
Rover...................10-HP	4-2.61x3.93	....	84.8	5.90	I	3	I	In	Als	C	105.0	51.5	4.75/18	abce	1-Do	N	SP	U	Hs	4	N	SB	4.88	sp	R	N	M	N	......
Rover...................12-HP	4-2.71x3.93	....	91.3	5.70	I	3	I	In	Als	C	112.0	51.5	5.25/17	abce	1-Do	N	SP	U	Hs	4	N	SB	4.88	sp	R	N	M	N	......
Rover...................14-HP	6-2.40x3.54	....	96.2	6.00	I	4	I	In	Als	C	115.1	51.5	5.25/17	abce	1-Do	N	SP	U	Hs	4	N	SB	5.22	sp	R	N	M	N	......
Rover...................16-HP	6-2.65x3.93	....	130.9	6.00	I	4	I	In	Als	C	115.1	51.5	5.50/17	abce	1-Do	N	SP	U	Hs	4	N	SB	4.70	sp	R	N	M	N	......
Rover...................20-HP	6-2.87x3.93	....	153.2	6.00	I	4	I	In	Als	C	115.1	51.5	5.50/17	abce	1-Do	N	SP	U	Hs	4	N	SB	4.50	sp	R	N	M	N	......
Salmson-British...........S-4-C	4-2.72x3.85	50-4500	89.4	6.00	I	3	I	Se	Al	B	110.5	50.0	5.00/18	abce	1-Ho	N	SP	U	Hs	4	Y	SB	5.20	tt	R	N	M	N	1568
Salmson-British...........S-4-D	4-2.83x3.86	60-4500	97.4	6.00	I	3	I	Se	Al	B	112.2	51.5	6.25/16	abce	1-Ho	N	SP	U	Hs	4	Y	SB	4.90	tt	R	F	M	N	1680
Salmson-British...........S-6-D	6-2.95x3.86	90-4500	157.9	6.50	I	4	I	Se	Al	B	112.2	51.5	6.25/16	abce	2-Ho	N	SP	U	Hs	4	Y	SB	4.10	tt	R	F	H	N	1764
Singer......................5/7	4-2.36x3.39	27-4000	59.3	5.75	I	2	I	In	Al	C	91.0	45.0	4.00/18	abc	1-Ho	N	SP	U	Hs	4	Y	SB	5.57	sp	R	..	H	..	910
Singer..................Bantam	4-2.36x3.74	30-4400	65.5	6.45	I	3	I	In	Al	C	91.0	45.0	5.00/16	abc	1-Ho	N	SP	U	Hs	4	Y	SB	5.57	sp	R	N	H	N	952
Singer..............10-HP-Pop.	4-2.48x3.74	35-4200	72.29	6.45	I	3	I	In	Al	C	95.0	48.0	5.00/16	abc	1-Ho	N	SP	U	Hs	4	Y	SB	5.25	sp	R	N	H	N	1148
Singer............10-HP-Super	4-2.48x3.74	35-4200	72.29	6.45	I	3	I	In	Al	C	95.0	48.0	5.25/16	abc	1-Ho	N	SP	U	Hs	4	Y	SB	5.25	sp	R	N	H	N	1176
Singer..............12-HP-Std.	4-2.67x4.13	43-4200	93.03	6.30	I	3	I	In	Al	C	103.0	52.0	5.25/16	abc	1-Ho	N	SP	U	Hs	4	Y	SB	4.75	sp	R	N	H	N	1407
Singer............12-HP-Super	4-2.67x4.13	43-4200	93.03	6.30	I	3	I	In	Al	C	103.0	52.0	5.50/16	abc	1-Ho	N	SP	U	...	4	Y	SB	5.00	sp	R	..	H	N	1407
S. S. Jaguar..........1½ Litre	4-2.87x4.17	65-4500	108.3	7.25	I	3	I	In	Al	C	112.5	55.0	5.00/18	abcde	1-Do	N	SP	U	Hs	4	Y	SB	4.86	sp	R	N	M	N	......
S. S. Jaguar..........2½ Litre	6-2.87x4.17	102-4500	162.5	7.63	I	7	I	In	Al	C	120.0	58.0	5.50/18	abcde	2-Ho	N	SP	U	Hs	4	Y	SB	4.50	sp	R	N	M	N	......
S. S. Jaguar-"100"........2½ L	6-2.87x4.17	102-4500	162.5	7.63	I	7	I	In	Al	C	100.0	54.5	5.25/18	abcde	2-Ho	N	SP	U	Hs	4	..	SB	4.00	sp	R	N	M	N	......
S. S. Jaguar-"100"........3½ L	6-3.23x4.33	125-4250	212.6	7.20	I	7	I	In	Al	C	100.0	54.5	5.25/18	abcde	2-Ho	N	SP	U	Hs	4	Y	SB	3.80	sp	R	N	M	..	......
S. S. Jaguar..............3½ L	6-3.23x4.33	125-4250	212.6	7.20	I	7	I	In	Al	C	120.0	56.0	5.50/18	abcde	......	N	SP	U	Hs	4	Y	SB	4.25	sp	R	N	M	N	......
Standard..................Nine	4-2.36x3.93	30-4000	69.0	6.50	I	3	L	In	Al	C	85.0	46.0	5.00/16	abc	1-Do	N	SP	U	Hs	4	Y	SB	5.43	sp	R	N	M	N	1316

For abbreviations see page 268

FOREIGN PASSENGER CARS

MAKE AND MODEL	ENGINE										GENERAL				FUEL SYSTEM			TRANS-MISSION				REAR AXLE							
	Number of Cylinders Bore and Stroke (In.)	Maximum Brake Hp. at Specified R.P.M.	Piston Displacement (Cu. In.)	Compression Ratio (To 1)	Cylinder Arrangement	No. of Main Bearings	Valve Location	Crankcase Type	Piston Material	Camshaft Drive	Wheelbase (In.)	Tread—Rear (In.)	Tires (In. or Metric)	Oil Pressure to	No. Used and Type of Carburetor	Supercharged	Clutch Type	Location	Type	No. of Forward Speeds	Synchronizing Clutches	Final Drive	Gear Ratio—To 1	Torque taken by	Drive on	Independent Suspension	Service Brakes	Servo Unit Fitted	Chassis Weight (Lb.)
BRITISH—Continued																													
Standard........Ten	4-2.50x3.93	33-4000	77.3	6.50	I	3	L	In	Al	C	90.0	46.0	5.00/16	abc	1-Do	N	SP	U	Hs	4	Y	SB	5.29	sp	R	N	M	N	1344
Standard........Twelve	4-2.74x4.17	44-4000	98.1	6.50	I	3	L	In	Al	C	100.0	48.0	5.25/16	abcd	1-Do	N	SP	U	Hs	4	Y	SB	4.86	sp	R	N	M	N	1456
Standard........Fourteen	4-2.87x4.17	49-4000	108.5	6.50	I	3	L	In	Al	C	108.0	52.0	5.75/16	abcd	1-Do	N	SP	U	Hs	4	Y	SB	5.25	sp	R	N	M	N	1785
Standard........Twenty	6-2.87x4.17	65-3800	162.5	6.50	I	7	L	In	Al	C	116.0	52.0	6.00/16	abcd	1-Do	N	SP	U	Hs	4	Y	SB	4.75	sp	R	N	M	N	2009
Standard........V-Eight	8-2.50x4.17	75-4000	163.8	6.50	V	3	L	In	Al	C	102.0	52.0	5.75/16	abc	1-Do	N	SP	U	Hs	4	Y	SB	4.75	sp	R	N	M	N	1974
Talbot........BE-10	4-2.48x3.74	40-4500	72.3	7.00	I	3	L	In	Al	C	93.0	48.0	5.25/16	abce	1-Do	N	SP	U	Hs	4	Y	SB	5.44	sp	R	N	M	..	1288
Talbot........BP-21	6-2.95x4.72	82-3800	194.0	6.50	I	4	L	In	Al	C	118.0	56.0	6.25/16	abce	1-Do	Y	SP	U	Hs	4	Y	SB	4.30	sp	R	F	M	N	......
Talbot........BG-110	6-3.15x4.41	120-4500	206.0	6.20	I	7	I	In	Al	H	120.0	56.0	6.00/18	abc	1-Do	Y	SP	U	Hs	4	Y	SB	4.36	tt	R	N	M	..	2884
Triumph.....1½ Litre-Dolomite	4-2.72x3.93	50-4500	91.3	7.00	I	3	I	In	Al	C	108.0	52.5	5.00/17	abce	1-Ho	N	SP	U	Hs	4	Y	SB	5.00	sp	R	N	H	N	1650
Triumph........14/60-Vitesse	4-2.95x3.93	60-4500	107.8	6.60	I	3	I	In	Al	C	108.0	50.0	5.00/17	abce	2-Ho	N	SP	U	Hs	4	Y	SB	5.00	sp	R	N	H	N	1640
Triumph........14/60-Dolomite	4-2.95x3.93	60-4500	107.8	6.60	I	3	I	In	Al	C	110.0	52.05	5.50/17	abce	2-Ho	N	SP	U	Hs	4	Y	SB	5.00	sp	R	N	H	N	1740
Triumph........2 Litre-Dolomite	6-2.56x3.93	70-4500	121.4	6.80	I	4	I	In	Al	C	116.0	52.05	5.50/17	abce	2-Ho	N	SP	U	Hs	4	Y	SB	5.00	sp	R	N	H	N	1860
Triumph........2 Litre-Vitesse	6-2.56x3.93	70-4500	121.4	6.80	I	4	I	In	Al	C	116.0	50.0	5.25/17	abce	2-Ho	N	SP	U	Hs	4	Y	SB	5.00	sp	R	N	H	N	1750
Vauxhall........H-10-HP	4-2.50x3.74	35-3800	73.7	6.50	I	3	I	In	Als	C	94.0	47.0	4.50/17	abce	1-Do	N	SP	U	Hs	3	Y	SB	5.14	sp	R	F	H	N	......
Vauxhall........DY-12-HP	6-2.24x3.93	36-4000	93.4	6.43	I	4	I	In	Al	C	101.0	50.0	5.50/16	abcde	1-Do	N	SP	U	Hs	4	Y	SB	4.77	sp	R	F	M	N	1730
Vauxhall........DX-14-HP	6-2.42x3.93	42-3500	108.8	6.43	I	4	I	In	Al	C	101.0	50.0	5.50/16	abcde	1-Do	N	SP	U	Hs	4	Y	SB	4.77	sp	R	F	M	N	1730
Vauxhall........GY-25-HP	6-3.23x4.00	80-3400	196.1	6.00	I	4	I	In	Als	C	110.5	57.5	5.25/16	abcde	1-Do	N	SP	U	Hs	3	Y	SB	4.44	sp	R	F	H	N	2328
Vauxhall........GL-25-HP	6-3.23x4.00	80-3400	196.1	6.00	I	4	I	In	Als	C	130.0	57.5	6.25/16	abcde	1-Do	N	SP	U	Hs	3	Y	SB	4.44	sp	R	F	H	N	2384
Wolseley........12-HP	4-2.73x4.02	48-4000	94.4	6.60	I	3	I	In	Bi	C	98.0	56.0	5.75/16	abc	1-Do	N	SP	U	Hs	4	Y	SB	5.33	sp	R	N	H	N	......
Wolseley........14-HP	6-2.42x4.02	56-4300	110.9	6.30	I	4	I	In	Bi	C	106.0	56.0	6.00/16	abc	2-Do	N	SO	U	Hs	4	Y	SB	5.33	sp	R	N	H	N	......
Wolseley........16-HP	6-2.58x4.02	67-4200	125.8	6.00	I	4	I	In	Bi	C	117.5	61.0	6.50/16	abc	2-Do	N	SP	U	Hs	4	Y	SB	5.22	sp	R	N	H	N	......
Wolseley........18-HP	6-2.74x4.02	80-4200	141.6	6.50	I	4	I	In	Bi	C	106.0	56.0	6.00/16	abc	2-Do	N	SO	U	Hs	4	Y	SB	4.80	sp	R	N	H	N	......
Wolseley........21-HP	6-2.95x4.33	86-3800	177.9	6.00	I	4	I	In	Bi	C	117.5	61.0	6.50/16	abc	2-Do	N	SP	U	Hs	4	Y	SB	4.77	sp	R	N	H	N	......
Wolseley........25-HP	6-3.23x4.33	108-3600	212.6	6.00	I	4	I	In	Bi	C	117.5	61.0	6.50/16	abc	2-Do	N	SP	U	Hs	4	Y	SB	4.55	sp	R	N	H	N	......
Wolseley........25-HP	6-3.23x4.33	108-3600	212.6	6.00	I	4	I	In	Bi	C	145.2	61.0	7.00/16	abc	2-Do	N	SO	U	Hs	4	Y	SB	4.45	sp	R	N	H	N	......
CZECHOSLOVAKIAN																													
Praga........Baby	4-2.36x3.46	22-3200	60.7	5.84	I	3	L	Se	Als	H	100.0	46.0	5.25/16	abce	1-Up	Y	SP	U	Hs	3	Y	SB	5.56	Ta	R	A	M	N	1367
Praga........Lady	4-2.95x3.70	35-3500	101.3	5.77	I	3	L	Se	Als	H	104.3	49.6	5.75/16	abce	1-Up	Y	SP	U	Hs	3	Y	SB	5.11	sp	R	F	M	N	1775
Praga........Golden	6-3.35x4.53	80-3500	238.6	6.00	I	3	L	Se	Als	H	137.8	55.5	7.00/16	abce	1-Do	Y	SP	U	Hs	3	Y	Hy	4.54	sp	R	F	H	N	3175
Skoda........Popular	4-2.56x2.95	27-3500	60.7	6.40	I	2	I	In	Als	C	95.7	44.9	5.00/16	abce	Ho	N	SP	(f)	Hs	4	Y	SB	5.25	Ta	R	A	M	N	1102
Skoda........Rapid	4-2.76x3.54	31-3500	84.2	5.90	I	3	L	In	Als	C	104.3	48.0	5.75/16	abce	Ho	N	SP	U	Hs	4	Y	SB	5.50	Ta	R	A	H	N	1433
Skoda........Favorit	4-2.95x4.02	38-3500	109.8	5.90	I	6	L	In	Als	C	120.1	51.9	6.00/16	abce	Do	N	SP	U	Hs	4	Y	SB	5.57	Ta	R	A	H	N	2094
Skoda........Superb	6-2.95x4.33	65-3500	178.1	5.80	I	8	L	In	Als	C	129.9	53.5	6.50/16	abce	Up	N	SP	U	Hs	4	Y	SB	4.90	Ta	R	A	H	N	2579
Zbrojovka‡........Z-4	2-3.23x3.70	26-3200	60.9	5.00	I	3	2c	In	Al	2c	108.7	43.3	3.25/16	......	Ho	N	SP	U	Hs	3	N	SB	5.22‡	sp	F	A	M	N	1102
Zbrojovka‡........Z-5	4-2.83x3.54	40-3200	90.8	5.50	I	5	2c	In	Al	2c	112.9	46.8	3.25/16	......	Ho	N	SP	U	Hs	4	N	SB	4.88‡	sp	F	A	H	N	1433
FRENCH																													
Berliet........MKM-3	4-3.15x3.93	55-4000	122.0	6.00	I	3	I	In	Al	C	116.2	53.2	150/40	abce	Do	Y	SP	U	Hs	4	Y	SB	4.91	tt	R	F	M	N	1433
Bugatti........57	8-2.83x3.93	140-4800	201.3	6.00	I	6	I	In	Al	H	129.9	53.2	5.50/18	abce	1-Du	N	SP	U	Hs	4	N	SB	4.18	Ta	R	N	H	N	2094
Chenard & Walcker........MI	4-3.07x3.93	42-3200	116.6	6.00	I	3	I	In	Als	C	118.1	55.5	157/720	abce	Ho	Y	SP	U	Hs	3	Y	SB	4.77	sp	R	F	M	N	......
Chenard & Walcker........78	8-3.06x3.75	90-3500	219.6	6.30	V	3	L	In	Al	H	118.1	55.5	170/748	abce	Do	Y	SP	U	Hs	3	Y	SB	4.11	sp	R	F	H	N	......
Citroen‡........7	4-2.83x3.93	35-3200	99.3	5.90	I	3	I	In	Al	C	114.6	52.8	140/40	abc	Up	N	SP	U	Hs	3	Y	SB	5.00	Ta	F	A	H	N	2204
Citroen‡........Light-11	4-3.07x3.93	42-3200	116.6	5.90	I	3	I	In	Al	C	114.6	52.8	150/40	abc	Up	N	SP	U	Hs	3	Y	SB	5.00	Ta	F	A	H	N	2270
Citroen‡........11	4-3.07x3.93	42-3200	116.6	5.90	I	3	I	In	Al	C	121.6°	57.1	150/40°	abc	Up	N	SP	U	Hs	3	Y	SB	5.00	Ta	F	A	H	N	2425††
Delage........DI-12	4-3.15x4.21	52-4000	131.2	6.37	I	3	I	In	Al	C	116.1°	57.0	5.50/17	abce	Do	N	SP	U	Sa	4	..	SB	4.20	sp	R	F	H	N	1984°
Delage........D6-70	6-3.19x3.56	83-4000	170.8	6.90	I	4	I	In	Al	C	124.0°	57.0	5.50/17	abce	Do	N	SP	U	Sa	4	..	SB	4.20	sp	R	F	H	N	2094°
Delage........D8-100	8-3.15x4.21	115-4000	262.3	6.37	I	5	I	In	Al	C	142.9	59.0	7.00/17	abce	Do	N	SP	U	Sa	4	..	SB	3.90	sp	R	F	H	N	2646
Delage........D8-120	8-3.30x4.21	143-4000	291.7	7.25	I	5	I	In	Al	C	131.9	57.0	6.50/18	abce	Do	N	SP	U	Sa	4	..	SB	3.50	sp	R	F	H	N	2425
Delahaye........134	4-3.15x4.21	50-3400	131.2	6.37	I	3	I	In	Al	C	116.1	57.0	5.50/17	abc	Do	N	SP	U	Ps	4	N	SB	......	sp	F	F	M	N	......
Delahaye........135	6-3.15x4.21	95-3600	196.8	6.37	I	4	I	In	Al	C	116.1	58.4	5.50/17	abc	Do	N	SP	U	Ps	4	N	SB	3.72	sp	F	F	M	N	......
Hispano Suiza........KG	6-3.94x4.33	120-3200	298.9	5.00	I	7	I	Se	Al	H	134.6°	57.1	16/45	abcde	Up	...	MD	U	...	3	N	SB	3.64°	tt	..	N	M	Y	2646
Hispano Suiza........T12	12-3.94x3.94	200-3000	574.6	5.00	V	7	I	In	Al	H	150.0°	59.1	17/50°	abcde	Do	...	MD	U	...	3	N	SB	3.40°	tt	..	N	M	Y	3461
Hotchkiss........864	4-3.39x3.92	70-3800	141.0	5.75	I	3	I	In	Als	C	116.1	56.3	5.75/16	abc	Do	N	SP	U	Hs	4	Y	SB	4.37	sp	R	N	M	N	1907
Hotchkiss........Normal-680	6-3.15x3.93	85-3800	183.9	5.90	I	7	I	In	Als	C	121.7°	56.3	6.00/16°	abc	Do	N	SP	U	Hs	4	Y	SB	4.18	sp	R	N	M	N	1940°
Hotchkiss........Normal-686	6-3.39x3.93	100-3800	212.6	5.90	I	7	I	In	Als	C	121.7°	56.3	6.00/16	abc	Do	N	SP	U	Hs	4	Y	SB	3.82	sp	R	N	M	N	2083°
Hotchkiss........Normal-686	6-3.39x3.93	125-4000	212.6	7.00	I	7	I	In	Als	C	121.7°	56.3	6.00/16	abc	Dd	N	SP	U	Hs	4	Y	SB	3.33°	sp	R	N	M	N	2105°
Peugeot........202	4-2.68x3.07	28-3700	69.2	6.20	I	3	I	In	Al	C	96.5	46.0	130/145	ace	Do	N	SP	U	Hs	3	Y	Wo	5.50	tt	R	F	M	N	1025
Peugeot........302	4-3.07x3.62	44-4000	107.2	6.00	I	3	I	In	Al	C	113.4	50.4	140/400	ade	Do	N	SP	U	Hs	3	..	Wo	5.00	tt	R	F	M	N	1543
Peugeot........402	4-3.27x3.62	54-4000	121.5	5.85	I	3	I	In	Al	C	124.0°	54.3	150/400°	ace	Do	N	SP	U	Hs	3	Y	Wo	4.80	tt	R	F	M	N	1649°
Renault........488	4-2.28x3.74	20-3500	61.2	5.80	I	3	L	In	Al	H	92.5	45.6	4.75/16	abce	1-Up	N	....	U	Hs	3	Y	SB	......	tt	R	..	M	N	1565
Renault........603	4-3.35x4.13	50-3000	145.4	5.90	I	3	L	In	Al	H	106.7	51.2	5.50/16	abce	1-Do	N	SP	U	Hs	3	Y	SB	......	tt	R	..	M	Y	2425
Renault........493	6-3.35x4.72	83-3000	249.6	5.80	I	4	L	In	Al	H	116.5	57.2	6.25/16	abce	Do	N	SP	U	Hs	3	Y	SB	......	tt	R	N	M	Y	3505
Rosengart‡........5-HP	4-2.20x2.99	17-4000	45.6	6.00	I	2	L	Se	Al	H	86.6	39.4	120/40	c	Do	N	SP	U	Hs	3	N	SB	5.55	sp	F	N	M	N	772
Rosengart‡........7-HP	6-2.20x2.91	26-4000	66.9	6.50	I	3	L	Se	Al	H	90.6	39.4	120/40	e	Up	N	SP	U	Hs	4	N	SB	5.22	sp	F	N	M	N	882
Salmson........S-4-DA	4-2.95x3.86	51-4000	104.9	5.90	I	..	I	Se	Al	H	112.2	51.9	150/40	c	Up	N	SP	U	Hs	4	Y	SB	4.90	tt	R	F	M	Y	1521
Salmson........S-4-E	4-3.30x4.13	67-4000	130.3	5.85	I	..	I	Se	Al	H	118.1	55.1	6.00/16	c	Up	N	SP	U	Hs	4	Y	SB	4.60	tt	R	F	M	Y	1563
Talbot........T-4	4-3.39x3.93	62-4100	141.7	6.20	I	3	I	In	Al	C	116.1	57.7	160/40	abc	Do	N	SP	U	Hs	4	Y	SB	4.45	sp	R	F	M	N	1742
Talbot........15	6-2.91x4.11	75-4050	164.5	6.30	I	4	I	In	Al	C	116.1°	57.7	5.50/17°	abc	Do	N	SP	U	Hs	4	Y	SB	4.25°	sp	R	F	M	N	2072°
Talbot........3 Litre	6-3.07x4.11	90-4100	182.7	6.30	I	4	I	In	Al	C	125.9°	57.7	160/40	abc	Do	N	SP	S	Ps	4	Y	SB	4.25°	sp	R	F	M	N	2160°
Talbot........4 Litre	6-3.54x4.11	105-4000	243.7	6.30	I	7	I	In	Al	C	125.9°	57.7	6.00/17	abc	Do	N	SP	S	Ps	4	Y	SB	3.08°	sp	R	F	M	N	2204°
Unic........M-16	4-3.15x4.21	65-3500	131.2	5.90	I	3	I	In	Als	C	124.4	51.1	160/14	abce	Ho	No	SP	U	Sa	4	Y	SB	4.41°	sp	R	F	M	N	2161
Unic........M-60-C	6-2.95x4.45	90-3500	183.0	6.20	I	4	I	Se	Als	C	125.9	57.0	180/40	abce	Ho	No	DP	U	Sa	4	N	Hy	4.90	sp	R	F	M	N	2425
GERMAN																													
Adler‡........1-E	4-2.56x2.96	25-4000	60.7	6.00	I	3	L	In	Als	C	103.5	47.7	4.50/17	abce	Up	N	SP	U	Hs	4	Y	SB	5.43‡	sp	F	A	M	N	1250
Adler‡........2-EV	4-3.15x3.74	45-3800	116.5	6.25	I	3	L	In	Als	C	115.0	51.3	5.50/16	abce	Up	N	SP	U	Hs	4	Y	SB	4.37‡	sp	F	A	M	N	1740
Adler‡........2 Litre, 58-HP	6-2.79x4.13	58-3800	152.1	6.25	I	4	L	In	Als	H	110.2	55.1	6.00/16	abce	Do	N	SP	U	Hs	4	Y	SB	3.73	Ta	R	A	H	N	1870
Adler‡........3-G	6-2.96x4.34	65-3800	178.0	6.25	I	4	L	In	Als	C	126.0°	56.0	6.00/18	abce	Do	N	SP	U	Hs	4	Y	SB	4.46°	sp	R	F	H	N	2400°
Audi‡........	6-2.75x3.74	55-3500	137.5	....	I	7	I	Se	NB	B	122.0	55.1	5.25/17	abcde	1-Do	N	SP	U	Hs	4	Y	IG	5.25‡	Ta	F	F	H	N	......
B.M.W........320	6-2.60x3.78	45-3750	120.2	6.00	I	4	I	In	Al	C	147.6	51.2	5.50/16	abcde	1-Up	N	SP	U	Hs	4	Y	SB	4.55	sp	R	F	H	N	2204††
B.M.W........326	6-2.60x3.78	50-3750	120.2	6.00	I	4	I	In	Al	C	113.0	55.1	5.25/17	abcde	2-Up	N	SP	U	Hs	4	Y	SB	4.85	Ta	R	F	H	N	2425††
B.M.W........328	6-2.60x3.78	80-4500	120.2	7.50	I	4	I	In	Al	C	94.5	47.2	5.25/16	abcde	3-Do	N	SP	U	Hs	4	Y	SB	3.90	sp	R	F	H	N	1764††
DKW‡........	2-2.99x2.99	20-	41.7	5.90	I	3	N	Se	....	N	102.7	49.2	4.50/17	GL	1-Do	...	MO	U	Hs	3	N	IG	6.10‡	sp	F	F	M	N	......
DKW‡........	2-2.81x2.68	18-3500	35.4	5.90	I	3	N	Se	....	N	102.7	49.2	4.00/19	GL	1-Do	N	MO	U	Hs	3	N	IG	6.50‡	sp	F	F	M	N	......
Hanomag........Kurier	4-2.48x3.46	23-3500	65.5	5.80	I	3	I	In	Als	G	107.1	49.2	5.25/16	ac	Do	N	SP	U	Hs	4	Y	TB	5.90	sp	R	F	H	Y	1544
Hanomag........Rekord	4-2.80x3.74	35-3200	91.1	5.60	I	3	I	In	Als	C	111.0	49.2	5.50/16	ace	Up	N	SP	U	Hs	4	Y	TB	4.55	sp	R	F	H	Y	1654
Hanomag........Sturm	6-2.80x3.74	55-3200	136.9	5.70	I	4	I	In	Als	C	136.9	53.2	5.25/18°	ace	Up	N	SP	U	Hs	4	Y	TB	4.33	sp	R	F	H	Y	2095
Hansa-Lloyd........H-1100	4-2.56x3.23	28-3000	66.4	5.80	I	3	I	In	Als	G	106.3	51.9	5.25/16	abce	......	...	SP	U	Hs	4	N	SB	5.28	Ta	R	A	H	N	1146

For abbreviations see page 268

Mechanical Specifications of Foreign Passenger Cars—*Concluded*

MAKE AND MODEL	ENGINE: Number of Cylinders Bore and Stroke (In.)	ENGINE: Maximum Brake Hp. at Specified R.P.M.	ENGINE: Piston Displacement (Cu. In.)	ENGINE: Compression Ratio (To 1)	ENGINE: Cylinder Arrangement	ENGINE: No. of Main Bearings	ENGINE: Valve Location	ENGINE: Crankcase Type	ENGINE: Piston Material	ENGINE: Camshaft Drive	GENERAL: Wheelbase (In.)	GENERAL: Tread—Rear (In.)	GENERAL: Tires (In. or Metric)	GENERAL: Oil Pressure to	FUEL SYSTEM: No. Used and Type of Carburetor	FUEL SYSTEM: Supercharged	Clutch Type	TRANS-MISSION: Location	TRANS-MISSION: Type	TRANS-MISSION: No. of Forward Speeds	TRANS-MISSION: Synchronizing Clutches	REAR AXLE: Final Drive	REAR AXLE: Gear Ratio (To 1)	REAR AXLE: Torque taken by	Drive on	Independent Suspension	Service Brakes	Servo Unit Fitted	Chassis Weight (Lb.)
GERMAN—Continued																													
Hansa-Lloyd H-2000	6-2.76x3.35	50-3600	119.7	6.00	I	4	I	In	Als	G	113.0	52.7	5.50/16	abce	Do	...	SP	U	Hs	4	Y	SB	4.11	Ta	R	A	H	N	1389
Hansa-Lloyd H-3500	6-3.23x4.33	90-3500	212.6	6.00	I	4	I	In	Als	G	122.6	56.7	6.00/16	abce	Do	...	SP	U	Hs	4	Y	SB	3.80	Ta	R	A	H	N	2204
Horsh V-8	8-3.07x3.62	75-3000	214.4	5.80	V	3	I	In	Al	C	122.0	57.8	6.50/17	abcde	1-Do	...	SP	S	Hs	4	Y	SB	3.90	sp	R	A	H	..	3080
Horsh 850-51-53	8-3.42x4.09	120-3400	301.6	5.80	I	10	I	In	Al	Wo	147.6	59.7	7.00/17	abcde	1-Do	N	SP	S	Hs	4	Y	SB	3.90	...	R	F	H	N	4075
Maybach SW-38	6-3.54x3.93	140-4000	231.2	6.50	I	8	I	In	Al	H	133.1°	58.2	6.50/17	abc	2-Up	N	Dp	U	Ps	4	Y	SB	3.60	tt	R	A	M	Y	3086
Maybach Zeppelin	12-3.62x3.93	200-3000	486.6	6.30	V	8	I	In	Al	H	146.8	59.8	7.50/20	abcd	2-Up	N	MD	S	Ps	4	Y	SB	3.21°	tt	R	N	M	Y	4630
Mercedes-Benz 170-V	4-2.89x3.93	38-3400	103.5	6.00	I	3	L	In	Al	H	111.8	51.6	5.25/16	abce	Up	N	SP	U	Hs	4	Y	SB	4.14	tt	R	A	H	N	1433
Mercedes-Benz (1) 170-H	4-2.89x3.93	38-3400	103.5	6.00	I	3	L	In	Al	H	102.4	50.0	5.00/17	abde	Up	N	SP	U	Hs	4	Y	SB	5.13	tt	R	A	H	N	1433
Mercedes-Benz 230	6-2.85x3.54	55-3800	136.0	7.25	I	4	L	In	Al	H	120.1	54.7	6.00/16	abcde	Do	N	SP	U	Hs	4	Y	SB	4.17	tt	R	A	H	N	2204
Mercedes-Benz 320	6-3.25x3.93	78-3800	196.0	7.25	I	7	L	In	Al	H	129.9°	59.0	6.50/17	abcde	Do	N	SP	U	Hs	4	Y	SB	4.30	tt	R	A	H	N	2998
Mercedes-Benz 500	8-3.25x4.53	110-3300	300.0	6.60	I	9	L	In	Al	H	144.5	58.5	7.00/20	abcde	Up	N	SP	U	Hs	5	Y	SB	5.77	tt	R	N	H	Y	3968
Mercedes-Benz 540-K	8-3.46x4.37	180-	329.5	6.13	I	9	I	In	Al	H	129.5	59.1	7.00/17	abcde	Up	Y	SP	U	Hs	4	Y	SB	3.10	tt	R	A	H	Y	3748
Mercedes-Benz 770	8-3.74x5.32	200-	467.0	4.70	I	9	I	In	Al	H	147.6	59.1	7.50/20	abcde	Up	Y	SP	U	Hs	4	Y	SB	4.50	tt	R	N	M	Y	4365
Opel RV	4-2.66x2.95	27-4000	65.1	6.00	I	3	L	In	Al	H	92.0	46.0	4.50/16	abcde	1-Do	N	SP	U	Hs	3	N	SB	5.14	sp	R	N	H	N	1603††
Opel Kadett	4-2.66x2.95	27-4000	65.1	6.00	I	3	L	In	Al	H	92.0	46.0	4.50/16	abcde	1-Do	N	SP	U	Hs	3	N	SB	5.14	sp	R	F	H	N	1642††
Opel Olympia	4-3.15x2.91	37-3400	90.1	6.00	I	4	I	In	Ast	H	95.7	49$\frac{7}{32}$	5.00/16	abcde	1-Do	N	SP	U	Hs	4	N	SB	4.55	sp	R	F	H	N	1949††
Opel Super Six	6-3.15x3.23	59-3500	149.8	6.00	I	4	I	In	Ast	H	104.0	49$\frac{5}{8}$	5.50/16	abcde	1-Do	N	SP	U	Hs	3	Y	SB	4.30	sp	R	F	H	N	1724††
Opel Admiral	6-3.54x3.74	79-3200	219.7	6.00	I	4	I	In	Ast	H	219.7	57$\frac{5}{64}$	6.50/16	abcde	1-Do	N	SP	U	Hs	3	Y	SB	4.30	sp	R	F	H	N	2425††
Stoewer** Greif	4-2.95x3.31	36-3600	90.0	5.40	O	2	I	Se	NB	C	104.7	49.2	129/642	a	Up	N	SP	U	Hs	4	N	SB	4.72	Ta	R	A	H	N	1257
Stoewer Sedina	4-3.35x4.17	55-3300	146.8	5.80	I	3	I	In	NB	C	114.2	55.1	158/662	ab	Up	N	SP	U	Hs	4	Y	SB	3.88	tt	R	F	H	N	1521
Stoewer Arkona	6-3.35x4.17	82-3300	220.1	5.80	I	4	I	In	NB	C	131.9	56.0	168/702	ab	Up	N	SP	U	Hs	4	Y	SB	3.88	tt	R	F	H	N	1874
Wanderer W-23	6-2.95x3.94	62-3500	160.5	6.40	I	..	I	Se	Al	C	114.2	57.1	5.25/17	abcde	Ho	N	SP	S	Hs	4	Y	SB	4.10	...	R	F	H	N	2160
Wanderer W-26	6-2.95x3.94	62-3500	160.5	6.40	I	..	I	Se	Al	C	124.0	53.1	5.50/17	abcde	Ho	N	SP	S	Hs	4	Y	SB	4.88	...	R	F	H	N	2270
Wanderer W-24	4-2.95x3.94	42-3500	107.0	6.40	I	3	I	Se	Al	C	102.4	52.3	5.00/17	abcde	Do	N	SP	S	Hs	4	..	SB	4.50	...	R	F	H	N	1765
ITALIAN																													
Alfa-Romeo 6C-2300B°	6-2.76x3.93	70-4400	234.7	7.0°	I	7	I	In	Al	C	118.1°	57.5	5.50/18°	abe	1-Do	N	SP	U	Hs	4	Y	TB	5.38°	Ta	R	A	H	N	2161*
Alfa-Romeo Mille Miglia	6-2.76x3.93	95-4500	234.7	7.75	I	7	I	In	Al	C	118.1	57.5	5.50/18	abe	1-Do	N	SP	U	Hs	4	Y	TB	4.35	Ta	R	A	H	N	2161
Alfa-Romeo 8C-2900B	8-2.68x3.93	180-5000	221.5	5.75	I	10	I	In	Al	B	110.2°	33.2	5.50/19	abe	2-Up	Y	Dp	U	Hs	4	Y	TB	4.54	Ta	R	A	H	N	1873°
Bianchi S. 9/1400	4-2.68x3.93	42-4100	221.5	5.65	I	3	I	In	Al	B	109.6°	55.9	6.00/16	abe	1-Do	N	SP	U	Hs	4	Y	TB	5.10	sp	R	A	H	N	1675*
Fiat 500	4-2.05x2.64	13-4000	86.7	6.50	I	2	L	In	Al	C	78.7	42.5	4.00/15	abe	1-Do	N	SP	U	Hs	4	Y	TB	4.85°	sp	R	F	H	N	661
Fiat 508-C	4-2.68x2.95	32-4000	166.1	6.00	I	3	I	In	Al	C	95.3	48.0	5.00/15	abe	1-Do	N	SP	U	Hs	4	Y	TB	4.64°	sp	R	F	H	N	1091
Fiat 1500	6-2.56x2.'95	45-4000	151.7	5.75	I	4	I	In	Al	C	110.2	52.8	5.50/15	abe	1-Do	N	SP	U	Hs	4	Y	TB	4.44°	sp	R	F	H	N	1323
Isotta Fraschini 8-B	8-3.74 5.12	110-2400	449.5	5.00	I	..	I	Se	Al	T	145.7	67.7	32/6.75	abcde	Do	...	MD	S	Hs	4	Y	TB	3.75	...	R	..	M	Y	3527
Lancia Aprilia	4-2.83x3.27	46-4000	206.2	5.70	V	3	I	Se	Al	C	108.3°	49.6	140/400	abe	1-Up	N	SP	U	Hs	4	Y	Hy	4.10	Ta	R	A	H	N	1323
Lancia Series 4aAstura	8-2.93x3.35	85-4000	226.6	5.35	V	5	I	In	Al	C	136.7	55.1	150/450	abe	1-Do	N	SP	U	Hs	4	Y	Hy	4.27	sp	R	F	H	N	2204
Maserati 4-CM-1100	4-2.56x3.23	125-6600	165.9	6.00	I	3	I	In	Al	G	94.5	47.2	(2)	abe	1-Up	Y	SP	U	Hs	4	Y	TB	4.60	tt	R	F	H	N	1146
Maserati 4-CM-1500	4-2.72x3.93	150-6100	228.4	6.00	I	3	I	In	Al	G	94.5	48.0	(3)	abe	1-Up	Y	SP	U	Hs	4	Y	TB	4.18	tt	R	F	H	N	1323
Maserati 6-CM-1500	6-2.56x2.95	155-6800	151.9	6.00	I	4	I	In	Al	G	98.0	48.0	(4)	abe	1-Up	Y	SP	U	...	4	Y	TB	4.40	tt	R	F	H	N	1499
JAPANESE																													
Datsun 16	4-2.17x2.99	16-3600	44.1	5.40	I	2	L	In	Y	B	79.0	41.3	4.00/16	a	Dd	N	SP	U	Hs	3	N	SB	6.50	sp	R	N	M	N	904
Hatsudoki 2-GB-7	2-2.93x3.31	14-3000	44.7	5.00	O	2	L	Se	Al	H	72.8	42.1	4.00/16	a	1-Do	N	SP	U	Hs	3	N	Wo	7.00	sp	R	N	M	N	992
Nissan	6-3.23x4.49	85-3400	223.9	6.50	I	7	L	In	Als	C	110.0	56.7	6.00/16	abce	1-Do	...	SP	U	Hs	3	..	SB	4.09	sp	R	..	M	..	1984
Ohta	4-2.38x2.52	15-	44.9	5.50	I	2	L	In	Al	H	78.7	40.9	4.00/17	a	1-Do	...	SP	U	Hs	3	N	SB	6.00	sp	R	N	M	N	915
Rokko KP-46	8-3.15x4.53	105-1400	281.2	5.70	I	..	L	In	Al	H	127.6	57.9	7.50/16	abcd	1-Do	N	SP	U	Hs	3	Y	SB	4.44	sp	R	N	H	N	3087
Sumida HA	6-3.54x4.72	75-3800	286.1	5.00	I	..	I	...	NI	C	129.9	59.0	7.50/16	......	......	...	SP	U	Hs	4	..	SB	4.63	sp	R	N	M	N	4851
Toyota 7	6-3.30x4.02	65-3000	206.8	5.42	I	3	I	In	CI	H	112.2	57.1	5.50/27	abcde	1-Do	N	SP	S	Hs	3	N	SB	4.11	sp	R	N	H	N	3307
Tsukuba 104	4-2.18x2.99	15-3500	44.9	6.00	V	3	L	In	Al	H	74.8	39.4	4.00/18	b	1-Do	N	SP	U	Hs	3	N	Wo	6.00	ra	F	F	M	N	847
Wakaba WB-1800	4-3.07x3.74	43-3300	110.5	6.00	I	3	L	In	Al	H	109.5	53.1	140/430	abcde	Do	N	SP	U	Hs	3	Y	SB	4.80	tt	R	N	H	N	2646
SWEDISH																													
Scania-Vabis	6-4.33x5.35	125-2200	472.7	5.20	I	7	I	Se	Al	H	196.8	65.3	240/960	abc	Up	N	SP	U	Hs	4	..	SB	5.40	tt	R	N	M	Y	......
Volvo EC	6-3.31x4.33	86-3500	223.9	5.90	I	7	L	In	CI	C	114.2	54.3	6.25/16	abcde	1-Do	N	....	S	Hs	3	Y	SB	4.10	sp	R	N	H	N	1887

ABBREVIATIONS FOR FOREIGN PASSENGER CARS

- **2c**—Two Cycle
- **°**—Others also
- **†**—At extra cost
- **††**—Complete car weight
- **‡**—Front wheel drive
- ******—Air cooled engine
- **(1)**—Engine at rear of car
- **(2)**—Front 5.00/17, Rear 5.50/16
- **(3)**—Front 5.75/17, Rear 6.00/16
- **(4)**—Front 5.25/17, Rear 6.00/16
- **a**—Main bearings
- **A**—All four wheels
- **Al**—Aluminum alloy
- **Als**—Aluminum alloy with steel struts
- **Ast**—Aluminum alloy, steel struts, tin plated
- **b**—Camshaft bearings
- **B**—Bevel gear (camshaft drive)
- **Bi**—Bi-Metal
- **c**—Connecting rod bearings
- **C**—Chain
- **CS**—Copper Silicon
- **CI**—Cast Iron
- **d**—Piston pins
- **Dd**—Dual downdraft
- **Do**—Downdraft
- **Dp**—Double plate, dry
- **Du**—Double updraft
- **e**—Chain or timing gears
- **f**—Unit with rear axle
- **F**—Front wheels
- **G**—Spur gear
- **GL**—Gasoline lubrication
- **H**—Helical gear
- **H**—Hydraulic (brakes or clutches)
- **Ho**—Horizontal
- **Hs**—Hand shift
- **Hy**—Hyphoid
- **I**—In line (cylinders)
- **I**—In head (valves)
- **In**—Integral with cylinders
- **IG**—Internal gear
- **L**—At side (L-head)
- **M**—Mechanical brakes
- **MD**—Multiple disk, dry
- **MO**—Multiple disk in oil
- **N**—No or none
- **NB**—Nelson Bohnalite
- **NI**—Nickel Cast Iron
- **O**—Horizontally opposed
- **Pp**—Preselective, planetary drive
- **Ps**—Preselective
- **R**—Rear wheels
- **ra**—Radius arm
- **S**—Separate from engine
- **Sa**—Semi-automatic
- **SB**—Spiral bevel
- **SC**—Single plate, centrifugal
- **Se**—Separate casting from cylinders
- **SO**—Single plate, operating in oil
- **Sp**—Springs
- **Sp**—Single plate, dry
- **T**—Opposite, T-head
- **Ta**—Torque arm
- **TB**—Straight bevel gear
- **tt**—Torque tube
- **U**—Unit with engine
- **Up**—Updraft
- **V**—"V," type
- **Wo**—Worm drive
- **Y**—Yes

Mechanical Specifications—American Trucks—1938

KEY TO ABBREVIATIONS AND REFERENCE MARKS

GENERAL

Make and Model—Only basic models are listed. Variations are available with most manufacturers.

Tonnage Rating—Where a spread of ratings is given the maximum ratings are for ideal operating conditions and the minimum for extremely difficult conditions; the ranges between are for varying operating conditions.

Chassis Price—Chassis price quoted applies to standard wheelbase with standard tires. All prices are F.O.B. factory.

(***) Prices ready next issue.

Gross Vehicle Weight—Is chassis weight stripped, plus body and cab weight, plus payload. Gross vehicle weight is based on maximum recommended tire size, not on tires listed as standard.

Chassis Weight Stripped—Is weight of standard chassis with standard equipment, with crankcase and cooling system full, and 5 gal. of gasoline in tank. Does not include weight of cab. Exceptions are noted.

Maximum Tire Size—Is furnished at extra cost, if the maximum differs from the standard tire size. Dual rears are understood except where otherwise noted.

Maximum Brake H.P. at Given R.P.M.—Is actual dynamometer reading without accessories.

Gear Ratio Range in High—Ratios within the range given are available at no extra cost. Exceptions are noted.

Tractors—Unless given the designation N (meaning not available as tractor), all standard models may be assumed to be available as tractors.

(D)—Diesel equipped.
(N)—Not available as tractor.
(T)—Specifically designed for tractor use only.
c.o.e.—Cab-over-engine design.
e.b.s.—Engine-between-seat design
e.u.s.—Engine-under-seat design

(1) **Autocar**—Larger service brake areas on rear axles are provided when tires of 24" base are supplied.

(a) Price does not include auxiliary axle. Chassis weight includes auxiliary axle complete; area of brake lining and drum area do not include auxiliary rear axle.

(d) Models intended for dump or tractor service only.

(2) **Biederman**—Will furnish Continental or Hercules engines at the buyer's option.

(3) **Chevrolet**—For export only.

(*) **Chevrolet**—Governor set not to exceed 45 M.P.H. Export rating 12,300 lb.

(4) **Ford**—Retail list price at Dearborn. Includes: Front Bumper with two Bumper Guards, five wheels, two 6.00/20 front tires, two 32x6 rear tires, spare wheel carrier and ash tray.

(5) **Ford**—Retail list price at Dearborn includes: front bumper with two bumper guards, five wheels, two 6.50/17 front tires, two 7.00/17 rear tires, spare wheel carrier, two front shock absorbers and ash tray.

(5a) **Ford**—Retail list price at Dearborn includes: front and rear bumpers, five wheels, five 6.00/16 tires, spare wheel carrier, tire lock, front and rear shock absorbers and ash tray.

(6) **General Motors**—Tire size indicated in column "Maximum Tire Size Furnished" is maximum capacity dual tires recommended for normal operating conditions. T-16 to F-61H inclusive are also available for export only as coach chassis. Dual performance rear axles at extra cost for T-16 to T-46 inclusive and F-16 to F-46 inclusive. Double reduction rear axle at extra cost for T-33H, T-46, F-33H, and F-46. GMC "239" engine at price deduction for T-23 and F-23. GMC "286" engine at extra cost for T-23H and F-23H. GMC "400" engine group option at extra cost for T-46 and F-46. GMC "450" engine at extra cost for T-61, T-61H, F-61, and F-61H.

(7) **Hendrickson**—All models available in cab-over-engine design for slight additional charge.

(8) **International Harvester**—Those International Truck Models carrying dual tonnage ratings when suffixed with letter L or H are given the lower or the higher tonnage authorization of that dual rating respectively. Example: Model D-40 two to three tons. Model D-40-L two tons. Model D-40-H three tons. This method of rating is based on careful consideration of the nature of the roads to be traveled, the magnitude of the loads to be transported, the traveling speeds involved and in general the all around severity of the operation.

(11) **Mack**—Cab and body included in list price.

(12) **Mack**—Cab now included in list price.

(a) **Mack**—Weight in Chassis Weight column is shipping weight which includes weight of a chassis of medium standard wheelbase, cab, prevailing tire size and spare tire, ready for the road.

(13) **Moreland**—Models E-220D and E-260D available as diesel with Hercules DRXB engine.

(13a) **Moreland**—H-340 also available with Continental 22R and as diesel with Hercules DRXB and Cummins HB.

(13b) **Moreland**—Chain drive Model HC-340 also available with Continental 22R and as diesel with Hercules DRXB and Cummins HB.

(13c) **Moreland**—Chain drive Model TC-420 available as diesel with Hercules DHXB and Cummins HB.

(13d) **Moreland**—Model HD-400 also available with Continental 22R and as diesel with Hercules DRXB and Cummins HB.

(13e) **Moreland**—Model TD-420 available as diesel with Hercules DHXB and Cummins HB.

(14) **Reo**—Price includes cab and pick-up body

(14a) **Reo**—Price includes cab.

(15) **Schacht**—Available in E. B. S. design at additional cost.

(16) **Sterling**—Available with Diesel.

(17) **Walker**—Frame lengths may be changed, within limits, to suit individual requirements, at no additional cost.

(18) **White**—Each model shown is furnished with different specifications for different tonnage ratings. (*)—Factory governed speed 2400 r.p.m.

(*) **White**—Tractor rating only.

(19) **Coleman**—Model A-68 also furnished with Sterling LT-6 engine and Brown-Lipe Transmission No. 714. List price $13,000.

(20) **Indiana**—These models are for Government use and their chassis price depends upon quantity ordered.

(21) **Willys**—Specifications of Model CC38 Half-Tonner Cab Chassis, Model CP38 Cab Pick-up and Model CS38 Stake Body Chassis identical with Model SC38 but prices are $490, $530 and $545 respectively. Model CC38 complete with front bumper and shock eliminators (no rear fender). CP38 complete with cab, pickup box, spare tire, bumpers and shock eliminators.

(22) **Dodge and Fargo**—Special Heavy Duty Models for Export only, not sold in U. S. A.

(22a) **Fargo**—For Export only, not sold in U. S. A.

(23)—Chassis prices will follow in April issue.

MAKES—ALL

A LaF—American La France.
B—Bendix. **BL**—Brown-Lipe.
BO—Bendix front, Own rear.
Bu or Bud—Buda.
Cat—Caterpillar **Cl or Cla**—Clark.
Co—Covert **Con**—Continental.
Cum—Cummins-Diesel
Eat—Eaton **Fu**—Fuller.
Ha S—Hall Scott
Her—Hercules. **L—Lockheed.**
LO—Lockheed front, Own rear
LW—Lockheed front, Wisconsin rear.
Lyc—Lycoming.
N.P.—New Process.
O or Ow—Own.
Op or Opt—Optional.
Sal—Salisbury
Shu—Shuler.
Spi—Spicer **Ste or St**—Sterling.
T or Tim—Timken
T&M—Timken & Moreland
TW—Timken-Wisconsin
TWH—Timken Wisconsin Herrington
WG—Warner Gear
WH—Wisconsin Herrington.
W-Hes—Waukesha Hesselman.
Wau—Waukesha.
W or Wis—Wisconsin.
Ws—Westinghouse.

BRAKES—SERVICE

Location

2—Two Wheels, rear only.
2/4—Two-wheel brakes effective on all four wheels through driveshaft.
4—Four Wheels, front and rear
4r—Four Wheels, rear only.
6—Six Wheels, front and rear.

Type

I—Internal. X—External.

Operation

A—Air.
D—Hydraulic and mechanical.
H—Hydraulic.
M—Mechanical.
V—Vacuum.

BRAKES—HAND

Location

C—Center of double propeller shaft.
2—Rear wheels. 4—Four wheels.
J—Jackshaft.
R—Worm or bevel gearshaft.
T—Transmission.
F—Driveshaft.
P—Propeller shaft.

Type

D—Tru-Stop disk.
I—Internal. **X—External**

BRAKE DRUMS

Material

a—Cast alloy iron.
A—American Car Fdry
C—Centrifuse. **D**—Dayton.
E—Ermalite. **F**—Furnace Iron.
G—Gunite. **H**—Hunt Spiller.
N—Nickel Iron. **c**—Cast iron.
p—Pressed steel. **P—Pressed steel.**
s—Cast steel.
(Where a combination of any of the above is used, the first reference mark applies to the front and the second to the rear drums.)

FRAME

Type

I—"I" Beam. C—Channel.
T—Channel tapered front and rear.
L—Channel reinforced with liner.
B—Channel reinforced with both liner and fishplate.
P—Channel reinforced with plate.
TL—Channel tapered front and rear reinforced with liner.
D—Drop Center.
Tf—Tapered front.
X—x-Braced.

GOVERNOR STANDARD

Y—Yes. N—No

REAR AXLE

Final Drive and Type

B—Bevel. C—Chain.
D—Dead. F—Full-floating.
Hy—Hypoid
2—Double Reduction.
S—Spiral bevel.
W—Worm.
w/2—Worm or Double Reduction Optional.
½—Semi-floating.
¾—Three-quarter floating.
(*) Ratios other than standard at extra cost.
(**) Only one ratio.

Drive and Torque

A—Radius Rods and Torque Arm.
H—Hotchkiss. (springs)
R—Radius Rods
T—Torque Arm.
U—Torque Tube.

WHEELS DRIVEN

2F—Forward unit of Rear Axle Group.
2R—Rear Unit of Rear Axle Group.
4R—Forward and rear units of Rear Axle Group.
4F—Front Axle and Forward unit of Rear Axle Group.
4FR—Front axle and rear unit of rear axle group
6—All wheels.

FORMULAS

(For Transportation Engineering)

Miles Per Hour

$$\text{M.P.H.} = \frac{\text{R.P.M.} \times \text{D.}}{336 \times \text{F.G.R.}}$$

M.P.H.=Miles per hour.
R.P.M.=Revolutions per minute.
D.=Effective tire diameter.
F.G.R.=Final gear ratio.

Grade Ability

GA=TE—RR.
GA=Grade ability.
TE=Tractive effort.
RR=Road resistance—.012 for hard surfaced roads.

Tractive Effort

$$\text{TE} = \frac{\text{in. lb. torque} \times \text{F.G.R.} \times \text{EFF.}}{\text{G.V.W.} \times \text{R.}}$$

EFF.=Efficiency—.90 for all rear axles except worm then .85.
R.=Rolling radius.
G.V.W.=Gross vehicle weight.
in. lb. torque=12 x torque in lb. ft.

Torque in LB. FT.

Torque=.65 x cu. in. displacement. (This is approximate and should be used only when actual torque is not known.)

Cu. In. Displacement
D=B x B x .7854 x S x No. of Cyl.

AMA Horsepower Rating

$$\text{AMA H.P.} = \frac{\text{B} \times \text{B} \times \text{No. of Cyl.}}{2.5}$$

D=Cu. in. displacement.
B=Cylinder bore.
S=Cylinder stroke.

Line Number	MAKE AND MODEL	GENERAL (See Keynote): Tonnage Rating	Chassis Price	Standard Wheelbase	Max. W. B. Furnished	Gross Vehicle Weight with Max. Tires	Chassis Wt. (Stripped)	TIRE SIZES (D-dual rear, S-single rear): Standard Front and Rear	Maximum Tire Size Furnished	ENGINE DETAILS: Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings: Number, Diameter and Length	Governor Standard	TRANS-MISSION: Make and Model	Forward Spd's	REAR AXLE: Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	FRONT AXLE: Make and Model	BRAKES, SERVICE: Make Location Type Operat'n	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimension (Std. W. B.)	FRAME: Side Rail Dimensions	Type
1	Autocar.....(1) A		1095	139	179	13500	4790	6.50/20D	8.25/20	Her JXB	6-3⅝x4¼	263	5.8	184	73-2300	7-2½x10 13/16	Y	Cla 185F	4	Tim 54412	SF	H	** 6.8	Tim 31007	L41HV	308	470	c	TD	62½	7 15/16x2¾x7/32	T
2	B		1480	139	179	16000	5150	6.50/20D	8.25/20	Her JXC	6-3¾x4¼	282	5.8	197	78-2300	7-2½x10 13/16	Y	Cla 200VO	5	Tim 56410	SF	H	** 6.8	Tim 31008	L41HV	358	578	c	TD	62½	8x2¾x¼	T
3	(N) RM		2280	164	212	18500	6715	7.50/20D	9.00/20	Own 315	6-3¾x4¾	315	5.5	210	78-2400	7-3x12⅝	Y	Own RL5	5	Own RL	2F	H	6.49-7.89	Tim 32502	LO41DV	466	694	c	2I	84	8x2¾x¾	T
4	(N) RL		2595	164	212	20000	6895	8.25/20D	9.00/20	Own 358	6-4x4¾	358	5.5	250	85-2300	7-3x12⅝	Y	Own RL5	5	Own RL	2F	H	6.49-7.89	Tim 32502	LO41DV	466	694	c	2I	84	8 15/16x3x7/32	T
5	(N) D		3600	164	182	25090	7565	9.00/20D	9.75/20	Own 358	6-4x4¾	358	5.5	250	85-2300	7-3x12⅝	Y	Own DF5	5	Own DA	2F	H	6.49-7.89	Tim 35000	LO41DV	466	694	c	2I	84	8 15/16x3x7/32	T
6	(N) DF		4200	164	182	26500	8445	9.75/20D	10.50/20	Own 404	6-4¼x4¾	404	5.5	295	97-2290	7-3x14⅜	Y	Own DF5	5	Own DFA	2F	H	6.49-7.89	Tim 35100	LO41DV	580	930	c	2I	84	8 15/16x3x7/32	T
7	(N) N		4500	164	218	28000	8705	9.75/20D	10.50/20	Own 404	6-4¼x4¾	404	5.5	295	97-2200	7-3x14⅜	Y	Own DF5	5	Own N.	2F	H	7.20-8.57	Tim 35100	LO41DV	580	930	c	FD	84	9x3x¼	T
8	(N) NFS		5600	195	195	26000	10380	10.50/20D	10.50/20	Own 404	6-4¼x4¾	404	5.5	295	97-2200	7-3x14⅜	Y	Own DF5	5	Own TF	2F	H	7.20-8.57	Tim 26450	LO41DV	580	930	c	FD	119½	9x3x¼	T
9	(N) NF		5100	164	218	29500	9735	10.50/20D	10.50/24	Own 453	6-4½x4¾	453	5.5	335	108-2200	7-3x14⅜	Y	Own TF5	5	Own TF	2F	H	7.20-8.57	Tim 35100	LO41DV	580	930	c	FD	84	10⅜x3x¼	T
10	(N) CF		6000	172	203	30000	10300	36x7D	36x7	Own 453	6-4½x4¾	453	5.5	333	108-2200	7-3x14⅜	Y	Own TF4	4	Own C	2F	R	7.20-9.43	Own SCH	O21MV	502	930	c	FD	88½	9x3x¼	T
11	(N) TS		6600	204	204	29740	11404	10.50/24D	10.50/24	Own 453	6-4½x4¾	453	5.5	333	108-2200	7-3x14⅜	Y	Own TF4	4	Own TG	2F	H	7.20-8.68	Tim 26452	TO41A	659	1051	c	FD	129	10½x3x5/16	P
12	(N) T		5850	182	218	36000	10485	10.50/20D	11.25/24	Own 501	6-4½x5¼	501	5.5	375	123-2200	7-3¼x14 13/64	Y	Own TF5	5	Own TG	2F	H	7.20-8.68	Tim 26452	TO41A	631	930	c	FD	102	10⅜x3x¼	T
13	(T) RMT		2490	142	164	28000	6835	8.25/20D	9.00/20	Own 315	6-3¾x4¾	315	5.5	210	78-2400	7-3x12⅝	Y	Own RL5	5	Own RL	2F	H	6.49-7.89	Tim 32502	LO41DV	466	694	c	2I	62	8x2¾x¼	T
14	(T) 1TR		2730	142	164	32000	6875	8.25/20D	9.00/20	Own 358	6-4x4¾	358	5.5	250	85-2300	7-3x12⅝	Y	Own RL5	5	Own RL	2F	H	6.49-7.89	Tim 32502	LO41DV	466	694	c	2I	62	8 15/16x3x7/32	T
15	(T) 2TR		4100	142	164	36000	7805	9.00/20D	9.75/20	Own 404	6-4¼x4¾	404	5.5	295	97-2200	7-3x14⅜	Y	Own DF5	5	Own N	2F	H	6.49-7.89	Tim 32502	LO41DV	567	831	c	2I	62	8 15/16x3x7/32	T
16	(T) 3TR		4800	148	164	40000	8375	9.75/20D	10.50/20	Own 453	6-4½x4¾	453	5.5	333	108-2200	7-3x14⅜	Y	Own DF5	5	Own TF	2F	H	7.20-8.57	Tim 32502	LO41DV	567	831	c	FD	68	8 15/16x3x7/32	T
17	(T) 4TR		4950	148	164	45000	9265	9.75/20D	10.50/20	Own 453	6-4½x4¾	453	5.5	333	108-2200	7-3x14⅜	Y	Own TF5	5	Own TF	2F	H	7.20-8.57	Tim 35000	LO41DV	567	831	c	FD	68	8 15/16x3x7/32	T
18	(T) 5TR		5700	148	164	50000	9655	10.50/20D	10.50/24	Own 501	6-4½x5¼	501	5.5	375	123-2200	7-3¼x14 13/64	Y	Own TF5	5	Own TG	2F	H	7.20-8.68	Tim 35100	TO41A	580	930	c	FD	68	9x3x¼	T
19	(d) RLD		2595	148	148	16000	6785	8.25/20D	9.00/20	Own 358	6-4x4¾	358	5.5	250	85-2300	7-3x12⅝	Y	Own RL5	5	Own RL	2F	H	6.49-7.89	Tim 32502	LO41DV	466	694	c	2I	68	8 15/16x3x7/32	T
20	(d) DP		3750	148	164	18000	7635	9.00/20D	9.00/20	Own 358	6-4x4¾	358	5.5	250	85-2300	7-3x12⅝	Y	Own DF5	5	Own DFA	2F	H	7.13-7.89	Tim 35000	LO41DV	567	831	c	2I	68	8 15/16x3x7/32	T
21	(d) DH		4550	148	164	23000	8535	9.75/20D	9.75/20	Own 404	6-4¼x4¾	404	5.5	295	97-2200	7-3x14⅜	Y	Own DF5	5	Own TF	2F	H	7.20-8.57	Tim 35100	LO41DV	580	930	c	2I	68	9x3x¼	T
22	(d) S		5750	170	170	30600	10025	10.50/20D	10.50/24	Own 453	6-4½x4¾	453	5.5	333	108-2200	7-3x14⅜	Y	OwTF4-A3	12	Own CGA	2F	H	7.69-8.52	Tim 26452	LO41DV	580	930	c	FD	90	10⅜x3x¼	T
23	(d) C		6650	170	170	44000	11385	10.50/24D	11.25/24	Own 501	6-4½x5¼	501	5.5	375	123-2200	7-3¼x14 13/64	Y	OwTF4-A3	12	Tim 79733	2F	H	8.59-10.12	Tim 27452	LT41DV	688	1050	c	FD	90	10½x3x5/16	T
24	(c.o.e.) UA		1095	84	142	13500	4740	6.50/20D	8.25/20	Her JXB	6-3⅝x4¼	263	5.8	184	73-2300	7-2½x10 13/16	Y	Cla 185F	4	Tim 54412	SF	H	** 6.8	Tim 31008	L41HV	358	578	c	TD	62	7 15/16x2¾x7/32	T
25	(c.o.e.) UB		1545	84	142	16000	5290	7.00/20D	8.25/20	Her JXC	6-3¾x4¼	282	5.8	197	78-2300	7-2½x10 13/16	Y	Cla 200VO	5	Tim 56410	SF	H	** 6.8	Tim 32502	L41HV	358	578	c	TD	62	8x2¾x¼	T
26	c.u.s. (N) UD		3800	109	145	25000	7950	9.00/20D	9.75/20	Own 358	6-4x4¾	358	5.5	250	85-2300	7-3x12⅝	Y	Own UDF5	5	Own DA	2F	H	6.49-7.89	Tim 35100	LO41DV	466	694	c	2I	84¼	8x3x¼	T
27	c.u.s. (N) UDF		4550	109	145	26500	8540	9.75/20D	10.50/20	Own 404	6-4¼x4¾	404	5.5	295	97-2200	7-3x14⅜	Y	Own UDF5	5	Own DFA	2F	H	6.49-7.89	Tim 26452	LO41DV	580	930	c	2I	84¼	8x3x¼	T
28	c.u.s. (N) UN		5000	109	163	28000	9070	9.75/20D	10.50/20	Own 404	6-4¼x4¾	404	5.5	295	97-2200	7-3x14⅜	Y	Own UDF5	5	Own C & N	2F	H	7.20-8.57	Tim 26452	LO41DV	580	930	c	FD	84¼	8x3x¼	T
29	c.u.s. (N) UNFS		5600	145	145	27000	9585	10.50/20D	10.50/20	Own 404	6-4¼x4¾	404	5.5	295	97-2200	7-3x14⅜	Y	Own UDF4	5	Own TF	2F	H	7.20-8.57	Tim 26452	B41MV	637	930	c	FD	120¼	9x3x¼	P
30	c.u.s. (N) UNF		5400	128	163	29500	9780	10.50/20D	10.50/24	Own 453	6-4½x4¾	453	5.5	333	108-2200	7-3x14⅜	Y	Own UTF5	5	Own TF	2F	H	7.20-8.57	Tim 26452	LO41MV	580	930	c	FD	103¼	9x3x¼	T
31	c.u.s. (N) UTS		5600	145	145	29900	10927	10.50/24D	10.50/24	Own 453	6-4½x4¾	453	5.5	333	108-2200	7-3x14⅜	Y	Own UTF4	4	Own TG	2F	H	7.20-8.57	Tim 26452	TO41A	631	930	c	FD	120¼	10½x3x5/16	P
32	c.u.s. (N) UT		5900	128	163	36000	10440	10.50/20D	10.50/24	Own 501	6-4½x5¼	501	5.5	375	123-2200	7-3¼x14 13/64	Y	Own UTF5	5	Own TG	2F	H	7.20-8.68	Tim 26452	TO41A	631	930	c	FD	103¼	9x3x¼	T
33	c.u.s. (T) 1UTR		3850	98	109	32000	7140	8.25/20D	9.75/20	Own 358	6-4x4¾	358	5.5	250	85-2300	7-3x12⅝	Y	Own UDF5	5	Own DA	2F	H	6.49-7.89	Tim 35000	LO41DV	466	694	c	2I	73¼	8x3x¼	T
34	c.u.s. (T) 2UTR		4650	98	109	36000	8750	9.00/20D	9.75/20	Own 404	6-4¼x4¾	404	5.5	295	97-2200	7-3x14⅜	Y	Own UDF5	5	Own C	2F	H	7.20-9.43	Tim 35000	LO41DV	567	831	c	2I	73¼	8x3x¼	T
35	c.u.s. (T) 3UTR		5200	98	109	40000	8900	9.75/20D	10.50/20	Own 453	6-4½x4¾	453	5.5	333	108-2200	7-3x14⅜	Y	Own UDF5	5	Own C	2F	H	7.20-9.43	Tim 35000	LO41DV	567	831	c	FD	73¼	8x3x¼	T
36	c.u.s. (T) 4UTR		5450	98	109	45000	9200	9.75/20D	10.50/20	Own 453	6-4½x4¾	453	5.5	333	108-2200	7-3x14⅜	Y	Own UTF5	5	Own C	2F	H	7.20-9.43	Tim 26452	LO41DV	580	930	c	FD	73¼	8x3x¼	T
37	c.u.s. (T) 5UTR		5900	98	109	50000	9790	10.50/20D	10.50/24	Own 501	6-4½x5¼	501	5.5	375	123-2200	7-3¼x14 13/64	Y	Own UTF5	5	Own CG	2F	H	7.69-8.52	Tim 26452	TO41A	631	930	c	FD	75¼	9x3x¼	T
38	c.u.s. (d) UDP		4400	100	100	23000	8410	9.00/20D	9.75/20	Own 358	6-4x4¾	358	5.5	250	85-2300	7-3x12⅝	Y	Own UDF5	5	Own C	2F	H	7.20-9.43	Tim 26452	LO41DV	580	930	c	2I	75¼	8x3x¼	T
39	c.u.s. (d) US		5850	120	120	31000	10240	10.50/20D	10.50/24	Own 453	6-4½x4¾	453	5.5	333	108-2200	7-3x14⅜	Y	Fu	5	Own CGA	2F	H	7.69-8.52	Tim 26452	LO41DV	580	930	c	FD	95¼	9x3x¼	T
40	Available...PX-105	¾-1	1035	Op	Op	8500	2425	6.50/18S	6.50/20	Wau FC	4-3¼x4	133	5.8	98	36-2800	3-2⅛x4 1/16	N	WG T9	4	Tim 53508	SF	H	** 6.6	Tim 30000H	L41H	266	427	a	TX	Opt	4x2¼x⅛	T
41	X-110	1½	1385	Op	Op	11500	3600	6.50/20D	7.50/20	Wau ZKA	6-3⅜x4⅛	221	5.6	154	66-2900	4-2⅜x5⅝	N	WG T9	4	Tim 53508	SF	H	** 6.6	Tim 30000H	L41H	266	427	a	TX	Opt	8x2½x¼	T
42	X-120	1½-2	1575	Op	Op	12500	4000	6.50/20D	7.50/20	Wau BM	6-3⅝x4¼	263	5.4	165	78-3100	7-2⅝x10¼	N	WG T9	4	Tim 53308	SF	H	** 6.6	Tim 30000H	L41H	303	503	a	TX	Opt	10x2½x¼	T
43	X-170	2½	1840	Op	Op	15000	4800	7.50/20D	8.25/20	Wau BM	6-3⅝x4¼	263	5.4	165	78-3100	7-2⅝x10¼	N	WG T9	4	Tim 54411	SF	R	** 6.8	Tim 31000H	L41H	330	582	a	TX	Opt	10x2½x¼	T
44	X-210	2½	1930	Op	Op	15000	4850	7.50/20D	8.25/20	Wau BK	6-3¾x4¼	282	5.4	188	85-3200	7-2⅝x10¼	Y	Fu 5-A-330	4	Tim 54411	SF	R	** 6.8	Tim 31000H	L41H	330	582	a	TX	Opt	10x2½x¼	T
45	X-240	3-3½	2230	Op	Op	19000	5500	8.25/20D	9.00/20	Wau BK	6-3¾x4¼	282	5.4	188	85-3200	7-2⅝x10¼	Y	Fu 5-A-330	5	Tim 56410	SF	R	** 7.4	Tim 32502H	L41H	330	582	a	TX	Opt	12x2½x¼	T
46	X-300	4	3050	Op	Op	20700	7000	9.00/20D	9.75/20	Wau 6-110	6-4x4¾	358	5.1	254	110-2800	7-2⅞x12½	Y	Fu 5-A-430	5	Tim 58205	SF	R	** 7.8	Tim 33000H	L41H	376	660	a	TD	Opt	12x2½x¼	T
47	X-400	5	3940	Op	Op	26500	8200	9.75/20D	9.75/20	Wau 6-125	6-4⅜x5⅛	462	5.0	324	125-2600	7-3x13⅞	Y	Fu 5-A-620	5	Tim 65725H	WF	R	** 8.50	Tim 35000H	L41HV	462	768	a	TD	Opt	14x3x3/16	T
48	Biederman (2)...10	1	1095	145	157	10000	3100	7.00/20S	8.25/20S	Con 25A	6-3⅜x4	215	4.9	142	70-2800	4-2⅜x6⅜	Y	WG T9	4	Cla B373	BF	R	5.1-6.4	Cla F212	L41H	312	424	G	TX	54	7x3x3/16	T
49	20	1½	1295	157	180	11400	3800	7.00/20D	8.25/20	Wau 6BL	6-3½x4¼	245	5.2	162	75-2800	7-2⅝x10¼	Y	WG T9	4	Cla B373	BF	R	5.1-6.4	Cla F212	L41H	312	424	G	TX	82	7x3x3/16	T
50	30	2	1560	166	190	14000	4800	7.50/20D	9.00/20	Wau 6BL	6-3½x4¼	245	5.2	162	75-2800	7-2⅝x10¼	Y	Fu 5-A-29	4	Cla B373	BF	R	5.6-6.4	Cla F308	L41H	458	556	G	TX	82	7½x3x¼	T
51	40	2½	1750	180	200	15000	5500	8.25/20D	9.00/20	Wau 6BK	6-3¾x4¼	282	5.0	190	84-2800	7-2⅝x10¼	Y	Fu 5-A-29	5	Cla B613	BF	R	5.6-6.4	Cla F308	L41H	458	556	G	TX	105	7½x3x¼	T
52	50	3	2205	180	200	16000	6800	8.25/20D	9.00/20	Con E601	6-3⅞x4½	318	4.6	205	88-2600	7-2⅝x12 31/32	Y	Fu 5-A-29	5	Cla B805	BF	R	6.4-7.2	Cla F308	L41H	458	556	G	TX	105	8x3x¼	T
53	60	3½	2750	180	210	20000	7100	9.00/20D	10.50/20	Con E602	6-4⅛x4½	360	4.5	240	92-2600	7-2⅝x12 31/32	Y	Fu 5-A-38	5	Cla B805	BF	R	5.7-7.2	Cla F318	L41H	490	660	G	PX	105	8x3x¼	T
54	70	5	3600	157	210	24000	7530	9.75/20D	10.50/20	HerWXC3	6-4¼x4½	383	4.7	265	98-2500	7-2⅝x12 31/32	Y	Fu 5-A-38	5	Wis 1237	2F	R	7.0-9.4	Tim 35100	Ws41A	616	836	G	PX	76	9x3x¼	T
55	80	7½	4200	187	210	30000	8500	10.50/20D	12.00/22	Her RXB	6-4½x5¼	500	4.9	330	110-2200	7-3x12⅝		Fu 5-A-53	5	Wis 1737	2F	R	6.0-9.2	Tim 26450	Ws41A	616	836	G	PX	103	10x3x3/16	T
56	Brockway.....78	1½-2	895	138	164	.....	3965	6.00/20D	32x6	Con 24B	6-3 3/16x4⅜	210	5.7	154	71-3100	4-2¼x6	N	WG T9	4	Tim 53521H	SF	H	5.66-6.6	Tim 30000H	L41H	255	402	a	TX	65 3/16	7 15/16x3x7/32	T
57	83	1½-2½	1195	138	170	.....	4100	6.50/20D	7.50/20	Con 25B	6-3 7/16x4⅜	244	5.7	171	84-3250	4-2⅜x6⅜	N	WG T9	4	Tim 53521H	SF	H	5.66-6.6	Tim 30000H	L41HV	255	402	a	TX	65 3/16	7 15/16x3x7/32	T
58	87	2-2½	1240	144	176	.....	4435	6.50/20D	7.50/20	Con 28B	6-3⅜x4⅝	248	5.7	170	78-3100	7-2⅜x10 3/32	N	WG T9	4	Tim 53521H	SF	H	5.66-6.6	Tim 30000H	L41HV	255	402	a	TX	71 3/16	7 15/16x3x7/32	T
59	88	1½-3	1290	150	176	.....	4500	6.50/20D	7.50/20	Con 25B	6-3 7/16x4⅜	244	5.7	171	84-3250	4-2⅜x6⅜	N	WG T9	4	Tim 53307H	SF	H	6.2-6.8	Tim 30000H	L41HV	310	477	a	TX	71 3/16	7 15/16x3x7/32	T
60	90X	2½-3	1470	150	176	.....	4635	7.00/20D	34x7	Con 28B	6-3⅜x4⅝	248	5.3	170	78-3100	7-2⅜x10 3/32	N	WG T9	4	Tim 53307H	SF	H	5.83-6.8	Tim 31000H	L41HV	302	528	a	TX	77 3/16	7 15/16x3x7/32	T
61	92	1½-4	1560	150	188	.....	4700	7.00/20D	8.25/20	Con 25B	6-3 7/16x4⅜	244	5.7	171	84-3250	4-2⅜x6⅜	N	WG T9	4	Tim 54411H	SF	H	5.83-6.8	Tim 31000H	L41HV	329	580	a	CD	83 3/16	8x3x¼	T
62	94	1½-5	1850	156	188	.....	5050	7.50/20D	8.25/20	Con 25B	6-3 7/16x4⅜	244	5.7	171	84-3250	4-2⅜x6⅜	N	BL B341	4	Tim 56410H	SF	H	6.16-7.4	Tim 31000H	L41HV	329	580	a	CD	83 3/16	8x3x¼	T
63	96	2½-3	1740	156	176	.....	5150	7.00/20D	8.25/20	Con 29B	6-3 11/16x4½	288	5.4	192	78-2650	7-2⅝x13	N	BL B341	4	Tim 53307H	SF	H	5.83-6.8	Tim 31000H	L41HV	302	528	a	CD	83 3/16	7 15/16x3x7/32	T
64	110	3	1900	156	188	.....	5490	7.50/20D	8.25/20	Con 29B	6-3 11/16x4½	288	5.4	192	78-2650	7-2⅝x13	N	BL B341	4	Tim 54411H	SF	H	5.83-6.8	Tim 31000H	L41HV	329	580	a	CD	83 3/16	8x3x¼	T
65	125X	3	2075	164	188	.....	5570	7.50/20D	8.25/20	Con 31B	6-3⅞x4½	318	5.5	214	86-2600	7-2⅝x13	N	BL B341	4	Tim 54411H	SF	H	5.83-6.8	Tim 31000H	L41HV	329	580	a	CD	91 3/16	8x3x¼	T
66	130	3-4	2245	164	206	.....	6270	8.25/20D	9.00/20	Con 29B	6-3 11/16x4½	288	5.4	192	78-2650	7-2⅝x13	N	BL B341	4	Tim 56410H	SF	R	6.16-7.4	Tim 32505H	L41HV	329	580	a	CD	91 3/16	8x3x¼	T
67	145	3-4	2385	176	206	.....	6390	8.25/20D	9.00/20	Con 31B	6-3⅞x4½	318	5.5	214	86-2600	7-2⅝x13	N	BL B341	4	Tim 56410H	SF	R	6.16-7.4	Tim 32505H	L41HV	329	580	a	CD	103 3/16	8x3x¼	T
68	150X-4	3½-4	2680	176	206	.....	6520	8.25/20D	9.00/20	Con 32B	6-4⅛x4½	361	5.4	252	95-2500	7-2⅝x13	Y	BL 3241	4	Tim 56410H	SF	R	5.71-7.4	Tim 32505H	L41HV	329	580	a	CD	103 3/16	8x3x¼	T
69	150X-5	3½-4	2710	176	206	.....	6570	8.25/20D	9.00/20	Con 32B	6-4⅛x4½	361	5.4	252	95-2500	7-2⅝x13	Y	Fu 5-A-43	5	Tim 56410H	SF	R	5.71-7.4	Tim 32505H	L41HV	329	580	a	CD	103 3/16	8x3x¼	T
70	120	2½-3	2260	156	188	.....	5800	7.50/20D	8.25/20	Con 30B	6-4x4⅛	311	4.2	203	85-2500	7-2¾x13 5/16	N	BL 314	4	Tim 54300H	SF	H	4.86-5.83	Tim 32505H	L41H	329	580	a	CD	69	8x3x¼	T
71	140	3-3½	2850	156	206	.....	6385	8.25/20D	9.00/20	Con 30B	6-4x4⅛	311	4.2	203	85-2500	7-2¾x13 5/16	Y	BL 314	4	Wis 5000L	2F	R	6.00-7.35	Tim 32505H	L41HV	329	580	a	CD	69	8x3x¼	T
72	141	3½-4	3355	170	200	.....	7450	9.00/20D	9.75/22	Con 30B	6-4x4⅛	311	4.2	203	85-2500	7-2¾x13 5/16	Y	BL 314	4	Wis 72000	2F	R	6.28-8.00	Shu 15685B1	L41HV	396	663	a	CD	83	8x3x¼	T
73	130-PS	4-4½	2525	164	206	.....	6250	34x7D	9.00/20	Con 29-B	6-3 11/16x4½	288	5.4	192	78-2650	7-2⅝x13	N	Fu 5-A-43	5	Tim 56200H	SF	R	6.16-7.4	Tim 32505H	L41HV	329	580	a	CD	91 3/16	8x3x¼	B
74	160X	4-5	3295	153	219	.....	7350	9.00/20D	9.75/22	Con 32B	6-4⅛x4½	361	5.4	252	95-2500	7-2⅝x13	Y	Fu 5-A-43	5	Tim 58205H	SF	R	6.14-7.8	Shu 15685B1	L41HV	396	663	a	CD	83 3/16	8⅛x3x3/16	T
75	170X	4-5	3640	153	219	.....	7960	9.00/20D	9.75/22	Con 33B	6-4⅛x4¾	381	4.4	276	106-2600	7-2¾x13 5/16	Y	Fu 5-A-62	5	Wis 72000L	2F	R	5.00-8.40	Shu 15685B1	L41HV	396	663	a	CD	83 3/16	8⅛x3x3/16	T
76	165X	5-7	3795	153	219	.....	8150	9.75/20D	10.50/22	Con 32B	6-4⅛x4½	361	5.4	252	95-2500	7-2⅝x13	Y	Fu 5-A-62	4	Wis 1337BH	2F	R	5.63-8.59	Shu 15685B1	L41HV	484	772	a	CD	83 3/16	8¼x3x⅜	T
77	175X	5-7½	4290	153	219	.....	8550	9.00/20D	10.50/22	Con 34B	6-4⅜x4¾	427	4.2	308	118-2600	7-2¾x13 5/16	Y	Fu 5-A-62	5	Wis 1337BH	2F	R	5.63-8.59	Shu 15685B1	L41HV	484	772	a	CD	83 3/16	8¼x3x⅜	T
78	195X	5-7½	4230	153	219	.....	8650	9.75/20D	10.50/22	Con 33B	6-4⅛x4¾	381	.4	376	106-2600	7-2¾x13 5/16	Y	Fu 5-A-62	5	Wis 1337BH	2F	R	5.63-8.59	Shu 15685B1	L41HV	484	772	a	CD	83 3/16	8¼x3x⅜	T
79	220X	7½-10	4930	153	219	.....	9050	10.50/20D	11.25/24	Con 34B	6-4⅜x4¾	427	4.2	308	118-2600	7-2¾x13 5/16	Y	Fu 5-A-62	5	Wis 1757H	2F	R	6.42-8.5	Shu 15685B1	L41HV	531	899	a	CD	83 3/16	8¼x3x⅜	T
80	240X	6-7½	5130	153	219	.....	8590	9.75/20D	10.50/24	Con 35B	6-4½x5¼	501	4.3	364	135-2200	7-2¾x13 5/16	Y	Fu 5-A-62	5	Wis 1337BH	2F	R	5.63-8.59	Shu 15685B1	L41HV	484	772	a	CD	83 3/16	8¼x3x⅜	T
81	260X	10	6030	195	219	.....	9720	10.50/22D	11.25/24	Con 35B	6-4½x5¼	501	4.3	364	135-2200	7-2¾x13 5/16	Y	Fu MHU	4	Wis 1757H	2F	R	6.42-8.5	Shu 15695B1	L41HV	531	899	a	CD	125 3/16	8¼x3x⅜	T
82	260S	10	6380	195	219	.....	10000	10.50/24D	11.25/24	Con 35B	6-4½x5¼	501	4.3	364	135-2200	7-2¾x13 5/16	Y	Fu MHU	4	Wis 1757H	2F	R	6.42-8.5	Shu 15695B1	Lw41DV	600	899	a	CD	125 3/16	8¼x3x⅜	B
83	V-1200	15	10500	156	240	.....	12400	11.25/22D	11.25/24	A LaF V12	12-4x5	753	5.1	505	240-2800	4-3½x9¼	Y	BL 7351	5	Wis 1910W	2F	R	7.16-10.0	Tim 27452A1	Ws41A	560	867	a	CD	68	10x3x3/16	T

♦84	Chevrolet Mas. HC	½	465	112	112	4600	2250	6.00/16S	15-6S	Own	6-3½x3¾	216	6.2	170	78-3200	4-2¾x5 7/16	N	Own	3	Own	S½	U	4.11-3.82	Own	O4IH	158	288	a	2I	38¼	5¾x2¼x5/32	C
♦85	(1).... Mas. HD	¾	543	122	122	5200	2470	15-6S	15-6S	Own	6-3½x3¾	216	6.2	170	78-3200	4-2¾x5 7/16	N	Own	3	Own	S½	U	**-4.11	Own	O4IH	158	288	a	2I	48½	5¾x2¼x5/32	C
♦86	...... Mas. HE	1	585	122	122	5800	2640	7.00/17S	7.00/17S	Own	6-3½x3¾	216	6.2	170	78-3200	4-2¾x5 7/16	N	Own	3	Own	S½	U	**-4.11	Own	O4IH	194	353	a	2I	48½	5¾x2¼x5/32	C
♦87	.... Mas. TA	1½	583	131	131	7900	3145	6.00/20†S	32x6**S	Own	6-3½x3¾	216	6.2	170	78-3200	4-2¾x5 7/16	N	Own	4	Own	SF	U	5.43-6.17	Own	O4IH	330	532	p	2I	57¾	7x2⅜x7/32	C
♦88	.... Mas TB	1½	604	131	131	9300	3220	6.00/20D	7.00/20	Own	6-3½x3¾	216	6.2	170	78-3200	4-2¾x5 7/16	N	Own	4	Own	SF	U	5.43-6.17	Own	O4IH	330	532	p	2I	57¾	7x2⅜x7/32	C
♦89	(*) Mas. Spc TB	1½	729	131	131	13300	3400	6.50/20†D	32x6	Own	6-3½x3¾	216	6.2	170	78-3200	4-2¾x5 7/16	N	Own	4	Own	SF	U	5.43-6.17	Own	O4IH	330	532	p	2I	57¾	7x2⅜x7/32	C
♦90	.... Mas. TC	1½	609	157	157	7900	3190	6.00/20†S	32x6**S	Own	6-3½x3¾	216	6.2	170	78-3200	4-2¾x5 7/16	N	Own	4	Own	SF	U	5.43-6.17	Own	O4IH	330	532	p	2I	83¼	7x2⅜x7/32	C
♦91	.... Mas. TD	1½	629	157	157	9300	3300	6.00/20D	7.00/20	Own	6-3½x3¾	216	6.2	170	78-3200	4-2¾x5 7/16	N	Own	4	Own	SF	U	5.43-6.17	Own	O4IH	330	532	p	2I	83¼	7x2⅜x7/32	C
♦92	(*) Mas Spc. TD	1½	754	157	157	13300	3530	6.50/20†D	32x6	Own	6-3½x3¾	216	6.2	170	78-3200	4-2¾x5 7/16	N	Own	4	Own	SF	U	5.43-6.17	Own	O4IH	330	532	p	2I	83¼	7x2⅜x7/32	C
♦93	(3) TG155L(coe)	....	(23)	155	155	14300	4000	6.00/20D	32x6	Own	6-3½x3¾	216	6.2	170	78-3200	4-2¾x3 7/16	N	Own	4	Own	SF	U	**-6.17	Tim 31021H	WO4IH	339	532	c	2I	111½	7 1/16x2 13/32x¼	C
♦94	(3) TG155H(coe)	....	(23)	155	155	17000	4580	6.00/20D	34x7	Own	6-3½x3¾	216	6.2	170	78-3200	4-2¾x3 7/16	N	Own	4	Eat 1261	SF	U	5.14-7.15	Tim 31021H	WO4IH	339	570	c	2I	111½	7 1/16x2 13/32x¼	C
♦95	(3) BG183	....	(23)	183	183	14800	4375	6.00/20D	7.50/20	Own	6-3½x3¾	216	6.2	170	78-3200	4-2¾x3 7/16	N	Own	4	Own	SF	U	**-6.17	Tim 31021H	WO4IH	339	532	c	2I	.....	7⅛x2⅜x9/32	D
♦96	(3) BG185	....	(23)	185	185	13300	3950	6.00/20D	7.50/20	Own	6-3½x3¾	216	6.2	170	78-3200	4-2¾x3 7/16	N	Own	4	Own	SF	U	**-6.17	Own	O4IH	330	532	c	2I	.....	7⅛x2⅜x9/32	D
♦97	(3)TD155L(coe)(D)	....	(23)	155	155	14800	5070	6.00/20D	32x6	Her DJXB	6-3½x4½	260	14.	178	77-2600	7-3x10 7/32	Y	Cla	4	Own	SF	U	**-5.43	Tim 31021H	WO4IH	339	532	c	2I	111½	7 1/16x2 13/32x¼	C
♦98	(3)TD155H(coe)(D)	....	(23)	155	155	17500	5630	6.00/20D	34x7	Her DJXB	6-3½x4½	260	14.	178	77-2600	7-3x10 7/32	Y	Cla	4	Eat 1261	SF	U	5.14-7.15	Tim 31021H	WO4IH	339	570	c	2I	111½	7 1/16x2 13/32x¼	C
♦99	(3) BD183 (D)	....	(23)	183	183	15800	5505	6.00/20D	8.25/20	Her DJXB	6-3½x4½	260	14.	178	77-2600	7-3x10 7/32	Y	Cla	4	Own	SF	U	**-5.43	Tim 32506H	WO4IH	346	532	c	2I	.....	7⅛x2⅜x9/32	D
100	Clydesdale...34-D	1½	2285	140	180	11000	3550	6.00/20S	8.25/20	Bud 4LD196	4-3⅝x4¾	196	...	13	85-2200	5-3x7¾	Y	WG T9	4	Cla R750	SF	H	5.56-35.0	Cla F266	L4IH	256	448	A	TX	64	8x2¾x3/16	T
101	..........40-D	2	2445	140	180	12000	3650	6.50/20D	8.25/20	Her DJXB	6-3½x4½	260	...	179	77-2600	7-3x10 7/32	Y	BL 2341	5	Tim 53300H	SF	H	6.2 -39.3	Tim 31000H	L4IH	264	452	A	TX	64	8x2¾x3/16	T
102	(D)........ 70D	2½-3	3245	140	200	14000	3650	7.00/20D	9.00/20	Her DJXB	6-3½x4½	260	...	179	77-2600	7-3x10 7/32	Y	Cla 200V	5	Tim 54400	SF	H	6.8 -41.2	Tim 31000H	L4IHV	328	528	A	TX	64	9x2¾x3/16	T
103	(D)........ 75D	3-3½	3685	140	210	16000	3865	7.50/20D	9.00/20	Bud 6LD275	6-3½x4¾	275	...	204	86-2600	7-3x11½	Y	Cla 200V	5	Tim 56410H	SF	H	6.16-37.3	Tim 31000H	L4IHV	338	578	A	TX	64	9x2¾x¼	T
104	(D)........ 80D	3-4	4610	140	210	20000	5500	8.25/20D	9.75/20	Bud 6LL315	6-3¾x4¾	275	..	204	96-2600	7-3x11½	Y	Cla 200V	5	Tim 58205H	SF	R	5.75-46.7	Tim 32501H	L4IHV	384	656	A	TX	64	10x2¾x¼	T
105	(D)........ 90D	4-6	5345	140	210	24000	6600	9.00/20D	10.50/20	Bud 6LD415	6-4x5½	415	..	305	105-2200	7-3x11½	Y	Cla 270V	5	Tim 75733H	SF	R	6.2 -50.4	Tim 33000H	L4IHV	384	656	A	CD	69	10x2¾x¼	T
106	(D)...... 105D	5-7	6685	145	220	28000	7300	9.75/20D	10.50/20	Bud 6LD468	6-4¼x5½	468	...	342	118-2200	7-3x11½	Y	Fu 5A620	5	Wis 1337BH	W/2	R	7.3 -51.1	Tim 35100	L4IHV	520	860	A	CD	69	12x2¾x¼	T
107	(D)...... 125D	7-10	7885	145	220	35000	8600	10.50/20D	12.00/20	Her DRXB	6-4⅜x5¼	474	...	350	125-2200	7-3x11½	Y	Fu 5A620	5	Wis 1737K	W/2	R	7.8 -54.9	Tim 26450	Ws41A	570	860	A	CD	69	12x3x3/16	T
108	(D)...... 150D	10-15	9865	150	220	40000	10200	10.50/20D	12.25/20	Bud 6LD691	6-4¾x6½	691	12	453	148-2000	7-3½x19½	Y	BL 7351	5	Wis 1910W	W/2	R	7.8 -54.9	Tim 26450W	Ws41A	585	875	A	CD	71	12x3x⅜	T
109	Condor....ACW-1	1½-2½	1565	136	220	12000	3300	6.00/20S	34x7	W-HES XBKH	4-3¾x4¾	210	6.2	125	41-2100	3-2¼x5⅝	Y	WG T9	4	Cla R750	SF	H	5.1-6.8	Cla F266	L4IH	256	432	a	TX	55	7 1/16x2¾x7/32	T
110	........BCW-1	2-3½	1635	136	220	13000	3650	6.00/20S	8.25/20	W-HES XBKH	4-3¾x4¾	210	6.2	125	41-2100	3-2¼x5⅝	Y	WG T9	4	Tim 53300	SF	H	4.57-6.6	Cla F266	L4IH	276	442	a	TX	55	7 1/16x2¾x7/32	T
111	........CCW-1	2½-4	1850	136	220	14000	4000	6.00/20S	8.25/20	W-HES XBKH	4-3¾x4¾	210	6.2	125	41-2100	3-2¼x5⅝	Y	WG T9	4	Tim 54411	SF	H	4.12-6.8	Cla F266	L4IH	360	568	a	TX	55	10x2¾x13/32	P
112	........FCW-1	2-3½	2160	136	220	13000	3900	6.00/20S	8.25/20	W-HES 6BKH	6-3¾x4¼	282	6.4	185	75-2500	7-2⅝x10¼	Y	Cla 185F	4	Tim 53300	SF	H	4.57-6.2	Cla F266	L4IH	276	442	a	TX	55	7 1/16x2¾x7/32	T
113	........GCW-1	3-4½	2525	136	220	15000	4100	6.50/20D	8.25/20	W-HES 6BKH	6-3¾x4¼	282	6.4	185	75-2500	7-2⅝x10¼	Y	Cla 185F	4	Tim 54411	SF	H	4.12-6.8	Tim 31000	L4IHV	388	578	a	TX	55	10x2¾x13/32	P
114	........CDW-1	3½-5	2955	136	220	18000	5450	7.00/20D	9.75/20	W-HES 6BKH	6-3¾x4¼	282	6.4	185	75-2500	7-2⅝x10¼	Y	Cla 200V	5	Tim 56410	SF	H	4.44-7.4	Tim 31000	L4IHV	388	578	a	TX	55	10x2¾x13/32	P
115	........CEW-1	4-5½	3175	136	220	20000	5850	7.50/20D	10.50/20	W-HES 6BKH	6-3¾x4¼	282	6.4	185	75-2500	7-2⅝x10¼	Y	Cla 200V	5	Tim 58200	SF	H	5.25-7.8	Tim 32500	L4IHV	436	660	a	TX	55	10x2¾x13/32	P
116	Corbitt........12B	1½	700	158	178	.....	3800	6.50/20D	7.50/20	Lyc WFC	6-3 1/16x4¾	210	6.2	160	82-3500	4-2⅜x7 1/16	N	WG T9	4	Tim 53615H	SF	H	5.14-6.6	Tim 30020H	L4IH	253	380	A	TX	78	6½x2¾x¼	T
117	............14B	1½-2	1765	159	179	.....	4800	7.50/20D	8.25/20	Wau 6BK	6-3¾x4¼	282	5.4	188	84-3200	7-2⅝x10¼	N	Cla B116C	4	Tim 54411H	SF	H	5.83-6.8	Tim 30020H	L4IH	330	506	A	TX	79	7x3x¼	T
118	............18B	2-3	2645	166	186	.....	6700	8.25/20D	9.00/20	Wau 6MK	6-4⅛x4¾	381	6.5	257	85-2400	7-2⅝x12½	N	Fu 5A430	5	Tim 56410H	SF	H	6.06-7.4	Tim 33000H	L4IHV	348	578	A	TX	81	8x3¼x¼	T
119	............22B	3-4	3250	167	187	.....	7750	9.00/20D	9.75/20	Wau 6MZ	6-4¼x4¾	404	6.0	274	90-2400	7-2⅝x12½	N	Fu 5A620	5	Tim 58300H	SF	H	5.57-7.8	Tim 35000H	L4IHV	414	660	A	TX	82	8x3¼x¼	T
120	..........14BT	2-3	2350	141	...	.....	5400	8.25/20D	8.25/20	Wau 6BK	6-3¾x4¼	282	5.4	188	84-3200	7-2⅝-10¼	N	Fu 5A330	5	Tim 54411W	SF	H	5.83-6.8	Tim 31000W	Ws41A	348	578	A	TX	61	7x3x¼	T
121	..........18BT	3-4	3250	144	...	.....	7200	9.00/20D	9.75/20	Wau 6Mz	6-4¼x4¾	404	6.0	274	90-2400	7-2⅝x12½	N	Fu 5A430	5	Ti 56411TW	SF	H	6.06-7.4	Tim 33000W	Ws41A	414	660	A	2I	59	8x3¼x¼	T
122	....(D) D22B4T	4-5	6925	149	...	.....	8200	9.75/20D	9.75/22	Cum HB	4-4⅞x6	448	17.	335	100-1800	5-4½x12	Y	Fu 5A620	5	Tim 58300W	SF	H	5.57-7.80	Ti 35100TW	Ws41A	575	660	A	2I	61	8x3¼x¼	T
123	..........22BT	4-6	4340	149	...	.....	8200	9.75/20D	9.75/22	Con 20R	6-4⅛x4¾	381	4.76	276	106-2600	7-2¾x13 13/16	N	Fu 5A620	5	Tim 58300W	SF	H	5.57-7.8	Ti 35000TW	Ws41A	414	660	A	2I	61	8x3¼x¼	T
124	....(D) D22B6T	5-6	7350	149	...	.....	9000	9.75/20D	9.75/22	Cum HB	6-4⅞x6	672	17.	500	150-1800	7-4½x16½	Y	Fu 5A620	5	Tim 58300W	SF	H	5.57-7.80	Ti 35100TW	Ws41A	575	660	A	2I	61	8x3¼x¼	T
125	....(D) D27D6T	6-7	7750	150	...	.....	9500	9.75/22D	10.50/22	Cum HB	6-4⅞x6	672	17.	500	150-1800	7-4½x16½	Y	Fu 5A620	5	Wis 1337BW	2F	H	5.63-7.52	Ti 35100TW	Ws41A	575	660	A	2I	62	8⅛x3¼x3/16	T
126	..........27DT	6-7½	4800	150	...	.....	8800	9.75/22D	10.50/22	Con 21R	6-4⅜x4¾	428	4.63	308	118-2500	7-2¾x13 13/16	N	Fu 5A620	5	Wis 1337BW	2F	H	5.63-7.52	Ti 35100TW	Ws41A	575	865	A	2I	62	8⅛x3¼x3/16	T
127	Gay Elder......76	1½	990	135	168	10000	3900	6.00/20D	7.00/20	Her JXA	6-3⅜x4¼	228	4.4	142	59-2800	7-2½x10 13/16	Y	WG T9	4	Tim 53300H	BF	H	4.56-6.6	Tim 30000H	L4IH	269	380	a	FX	77½	5⅞x3 13/16x3/16	C
128	86	2	1295	156	186	11200	4100	6.50/20D	7.50/20	Hex JXB	6-3⅝x4¼	263	4.4	164	68-2800	7-2½x10 13/16	Y	WG T9	4	Tim 53300H	BF	H	4.56-6.6	Tim 30000H	L4IH	269	380	a	FX	108½	7x3½x¼	C
129	111	2½	1545	156	186	13400	4800	7.00/20D	8.25/20	Her JXC	6-3¾x4¼	282	4.4	176	73-2800	7-2½x10 13/16	Y	WG T9	4	Tim 54410H	BF	H	4.12-6.8	Tim 31000H	L4IH	332	528	a	FX	108½	7x3½x¼	C
130	131	3	2100	165	204	16300	6300	7.50/20D	9.00/20	Her WXC	6-4x4½	339	4.7	234	94-2800	7-2⅝x13¼	Y	Fu MLU	4	Tim 56200H	BF	H	4.44-7.4	Tim 33000H	L4IH	353	578	a	FX	118½	9x3½x¼	C
131	161	3½	2595	165	204	19500	6500	9.00/20D	9.75/22	Her WXC3	6-4¼x4½	383	4.7	265	106-2800	7-2⅝x13¼	Y	Fu MGU	4	Tim 58205H	BF	R	4.55-7.8	Tim 33000H	L4IHV	395	660	a	FD	118½	9x3½x¼	C
132	201	4	3100	165	204	25300	7200	9.00/20D	10.50/22	Her WXC3	6-4¼x4½	383	4.7	265	106-2800	7-2⅝x13¼	Y	Fu MGU	4	Tim 65720H	WF	R	5.4-9.25	Tim 35000H	L4IHV	484	768	a	FD	118½	9x3½x¼	C
133	241	5-7	4195	165	234	33500	9500	10.50/20D	11.25/22	Her RXC	6-4⅝x5¼	529	4.4	350	114-2200	7-3x12½	Y	Fu MHU	4	Tim 66720H	WF	R	5.64-10.3	Tim 26450H	L4IHV	692	868	a	FD	149	10x3¾x5/16	C
134	Diamond T.....80	¾	560	119	119	.....	2750	6.00/16S	7.50/16	Her QXB3	6-3¼x4⅛	205	5.15	135	61-3300	7-2½x10 1/16	N	WG T83	3	Cla R650	SF	H	4.5-5.1	Cla F180	L4IH	212	352	C	TX	54	6x2¼x3/16	T
135	301	1-1½	615	135	135	10000	3100	6.00/16S	32x6	Her QXC3	6-3⅜x4⅛	221	5.8	151	66-3000	7-2½x10 1/16	N	WG T9	4	Cla 651	SF	H	4.6-5.4	Cla F180	L4IH	212	352	C	TX	70	6⅛x2 3/16x¼	T
136	304	1-1½	650	150	150	10000	3200	6.00/16S	32x6	Her QXC3	6-3⅜x4⅛	221	5.8	151	66-3000	7-2½x10 1/16	N	WG T9	4	Cla 651	SF	H	4.6-5.4	Cla F180	L4IH	212	352	C	TX	85	7½x3x¼	T
137	.....(c.o.e.) 401	1½-2	1025	96	192	12000	4400	6.00/20S	7.00/20	Her JXA	6-3⅜x4¼	228	5.7	153	68-2800	7-2½x10 13/16	N	WG T9A	4	Cla R750	SF	H	**-5.57	Cla F308	L4IHV	283	471	A	TX	72	8 3/16x3x3/16	T
138	.....(c.o.e.) 402	1½-2½	1065	96	192	13000	4600	6.00/20S	8.25/20	Her JXA	6-3⅜x4¼	228	5.7	153	68-2800	7-2½x10 13/16	N	WG T9A	4	Cla R950	SF	H	**-5.57	Cla F308	L4IHV	310	510	A	TX	72	8 3/16x3x3/16	T
139	404	1½-2½	825	139	163	12000	3500	6.00/20S	7.00/20	Her JXA	6-3⅜x4¼	228	5.7	153	68-2800	7-2½x10 13/16	N	WG T9	4	Cla R750	SF	H	5.57-6.33	Cla F266	L4IH	256	431	C	TX	60	8 1/16x3 1/32x¼	T
140	..........212AS	1½-2½	695	139	163	12000	3500	6.00/20S	7.00/20	Her JXA	6-3⅜x4¼	228	5.7	153	68-2800	7-2½x10 13/16	N	WG T9	4	Cla R750	SF	H	5.57-6.33	Cla F266	L4IH	256	431	C	TX	60	8 1/16x3 1/32x¼	T
141	..........212BS	1½-3	735	139	163	12500	3600	6.00/20S	7.50/20	Her JXA	6-3⅜x4¼	228	5.7	153	68-2800	7-2½x10 13/16	N	WG T9	4	Cla R950	SF	H	5.57-6.33	Cla F266	L4IH	283	471	C	TX	60	8 1/16x3 1/32x¼	T
142	...........221S	1½-3	825	139	175	13000	3750	6.00/20S	7.50/20	Her JXB	6-3⅝x4¼	263	5.8	184	78-2800	7-2½x10 13/16	N	WG T9A	4	Cla R950	SF	H	5.57-6.33	Cla F266	L4IHV	283	471	A	TX	60	8 1/16x3 1/32x¼	T
143	405	1½-3	865	139	163	12500	3600	6.00/20S	7.50/20	Her JXA	6-3⅜x4¼	228	5.7	153	68-2800	7-2½x10 13/16	N	WG T9	4	Cla R950	SF	H	5.57-6.33	Cla F266	L4IH	283	471	C	TX	60	8 1/16x3 1/32x¼	T
144	406	1½-3	955	139	175	13000	3750	6.00/20S	7.50/20	Her JXB	6-3⅝x4¼	263	5.8	184	78-2800	7-2½x10 13/16	N	WG T9A	4	Cla R950	SF	H	5.57-6.33	Cla F266	L4IHV	283	471	A	TX	60	8 1/16x3 1/32x¼	T
145	.....(c.o.e.) 507	2-3	1350	96	192	14000	5100	6.00/20D	8.25/20	Her JXB	6-3⅝x4¼	263	5.8	184	78-2800	7-2½x10 13/16	Y	Cla 185F	4	Cla R950	SF	H	**-5.57	Cla F322	L4IHV	310	510	A	TX	72	8 3/16x3x3/16	T
146	.... (D)D20	2-3½	2280	151	175	14000	5400	6.00/20D	8.25/20	Her DJXB	6-3½x4½	260	14.	178	77-2600	7-3x10 7/32	Y	Cla 185F	4	Eat 1300	SF	H	Dual Range	Cla F308	L4IHV	366	510	a	TX	72	8 1/16x3 1/32x¼	T
147	.... 244S	2-3½	1020	151	175	14000	4300	6.00/20D	8.25/20	Her JXB	6-3⅝x4¼	263	5.8	184	78-2800	7-2½x10 13/16	Y	Cla 185F	4	Cla R950	SF	H	5.57-6.33	Cla F308	L4IHV	310	510	A	TX	72	8 1/16x3 1/32x¼	T
148	509	2-3½	1155	151	175	14000	4300	6.00/20D	8.25/20	Her JXB	6-3⅝x4¼	263	5.8	184	78-2800	7-2½x10 13/16	Y	Cla 185F	4	Cla R950	SF	H	5.57-6.33	Cla F308	L4IHV	310	510	A	TX	72	8 1/16x3 1/32x¼	T
149	.....(c.o.e.) 607	2-4	1600	96	192	16000	5700	6.50/20D	8.25/20	Her JXC	6-3¾x4¼	282	5.8	197	84-2800	7-2½x10 13/16	Y	Cla 185F	4	Cla R1100	SF	H	**-5.57	Cla F322	L4IHV	366	613	A	TX	72	8 3/16x3x3/16	T
150	313	2-4	1250	151	175	16000	4700	6.50/20D	8.25/20	Her JXB	6-3⅝x4¼	263	5.8	184	78-2800	7-2½x10 13/16	Y	Cla 185F	4	Cla R1100	SF	H	5.57-6.33	Cla F308	L4IHV	366	613	A	TX	72	8 1/16x3 1/32x¼	T
151	320	2-4	1350	151	175	16000	4800	6.50/20D	8.25/20	Her JXC	6-3¾x4¼	282	5.8	197	84-2800	7-2½x10 13/16	Y	Cla 185F	4	Cla R1100	SF	H	5.57-6.33	Cla F308	L4IHV	366	613	A	TX	72	8 1/16x3 1/32x¼	T
152	611	2-4	1325	151	175	16000	4700	6.50/20D	8.25/20	Her JXB	6-3⅝x4¼	263	5.8	184	78-2800	7-2½x10 13/16	Y	Cla 185F	4	Cla R1100	SF	H	5.57-6.33	Cla F308	L4IHV	366	613	A	TX	72	8 1/16x3 1/32x¼	T
153	612	2-4	1425	151	175	16000	4800	6.50/20D	8.25/20	Her JXC	6-3¾x4¼	282	5.8	197	84-2800	7-2½x10 13/16	Y	Cla 185F	4	Cla R1100	SF	H	5.57-6.33	Cla F308	L4IHV	366	613	A	TX	72	8 1/16x3 1/32x¼	T
154	.....(c.o.e.) 609	2½-4½	1900	96	192	18000	6200	7.00/20D	9.00/20	Her JXD	6-4x4¼	320	5.6	204	84-2800	7-2½x10 13/16	Y	Cla 200V	5	Cla B645	SF	H	**-6.42	Cla F322	L4IHV	405	689	A	TD	72	8 3/16x3x3/16	T
155	353	2½-4½	1575	151	175	17000	5200	7.00/20D	9.00/20	Her JXC	6-3¾x4¼	282	5.8	197	84-2800	7-2½x10 13/16	Y	Cla 200V	5	Cla B645	SF	H	6.42-7.16	Cla F308	L4IHV	405	689	A	TD	72	8 1/16x3 1/32x¼	T
156	613	2½-4½	1650	151	175	17000	5200	7.00/20D	9.00/20	Her JXC	6-3¾x4¼	282	5.8	197	84-2800	7-2½x10 13/16	Y	Cla 200V	5	Cla B645	SF	H	6.42-7.16	Cla F308	L4IHV	405	689	A	TD	72	8 1/16x3 1/32x¼	T
157	360	2½-5	1675	151	175	17500	5300	7.00/20D	9.00/20	Her JXD	6-4x4¼	320	5.6	204	84-2800	7-2½x10 13/16	Y	Cla 200V	5	Cla B645	SF	H	6.42-7.16	Cla F308	L4IHV	405	689	A	TD	72	8 1/16x3 1/32x¼	T
158	614	2½-5	1750	151	175	17500	5300	7.00/20D	9.00/20	Her JXD	6-4x4¼	320	5.6	204	84-2800	7-2½x10 13/16	Y	Cla 200V	5	Cla B645	SF	H	6.42-7.16	Cla F308	L4IHV	405	689	A	TD	72	8 1/16x3 1/32x¼	T
159	.........(D)D30	2½-4½	2800	151	175	17500	6300	7.00/20D	9.00/20	Her DJXC	6-3¾x4½	298	14.	208	84-2600	7-3x10 7/32	Y	Cla 200V	5	Eat 17075	SF	H	Dual Range	Cla F308	L4IHV	405	689	a	TD	72	8 1/16x3 1/32x¼	T
160	..........512B	4-5½	3100	189	225	21000	7300	9.00/20D	9.75/20	Her WXLC3	6-4¼x4¾	404	5.5	294	118-2800	7-2⅝x10 21/32	Y	Cla 270V	5	Tim 58205H	SF	R	5.57-6.83	Tim 35022	L4IHV	405	689	a	TD	102	10x3x¼	T
161	.........412DR	4-5½	3200	189	225	21000	7300	9.00/20D	9.75/20	Her WXLC3	6-4¼x4¾	404	5.5	294	118-2800	7-2⅝x10 21/32	Y	Cla 270V	5	Wis 72000	2F	R	6.36-7.27	Tim 35022	L4IHV	407	689	a	TD	102	10x3x¼	T
162	.........512DR	5-6½	3450	189	225	24000	7700	9.00/20D	10.50/20	Her WXLC3	6-4¼x4¾	404	5.5	294	118-2800	7-2⅝x10 21/32	Y	Cla 270V	5	Wis 1337H	2F	R	6.85-7.37	Tim 35022	L4IHV	520	768	a	TD	102	10x3x¼	T
163	Dodge (1).....RC	Com'l	475	116	116	4000	2060	6.00/16S	6.00/16S	Own	6-3⅜x4 1/16	218	6.5	155	75-3000	4-2½x5⅜	N	N.P. 36220	3	Own	Hy½	H	3.54-4.78	Own	O4IH	148	251	C	TX	37 11/16	6x2x⅛	C
164	(1)....... RD15	¾	584	120	136	6000	2580	7.00/16††S	7.50/16S	Own	6-3⅜x4 1/16	218	6.5	155	75-3000	4-2½x5⅜	N	N.P. 36280	3	Own	S½	H	3.90-4.78	Own	O4IH	188	301	a	TX	41 11/16	6⅛x2 1/16x3/16	C
165	(1)....... RE15	¾	604	126	159	5700	3015	6.00/20†S	7.00/20S	Own	6-3⅜x4 1/16	218	5.8	150	73-3000	4-2½x5⅜	N	N.P. 36300	4	Own	SF	H	4.87-5.43	Own	O4IH	190	310	a	TX	51 3/16	6 11/16x2 21/32x3/16	CX
166	(1)....... RD20	1	584	120	136	6000	2580	7.00/16††S	7.50/16S	Own	6-3⅜x4 1/16	218	6.5	155	75-3000	4-2½x5⅜	N	N.P. 36280	3	Own	S½	H	3.90-4.78	Own	O4IH	188	301	a	TX	41 11/16	6⅛x2 1/16x3/16	C
167	(1)....... RE20	1	604	126	159	6200	3015	6.00/20†S	7.00/20S	Own	6-3⅜x4 1/16	218	5.8	150	73-3000	4-2½x5⅜	N	N.P. 36300	4	Own	SF	H	4.87-5.43	Own	O4IH	190	310	a	TX	51 3/16	6 11/16x2 21/32x3/16	CX
168	(1)....... RE30	1½-2	604	126	159	9500	3015	6.00/20†S	7.00/20	Own	6-3⅜x4 1/16	218	5.8	150	73-3000	4-2½x5⅜	N	N.P. 36300	4	Own	SF	H	4.87-5.43	Own	O4IH	190	310	a	TX	51 3/16	6 11/16x2 21/32x3/16	CX
169	(1)....... RF35	1½-2	655	126	190	11500	3340	6.00/20†S	7.50/20	Own	6-3⅜x4¼	228	5.8	158	78-3000	4-2½x5⅜	N	N.P 36310	4	Own	SF	H	5.66-6.33	Own	O4IH	263	406	a	TX	51 3/16	7x2 21/32x7/32	CX
170	(1)....... RG40	1½-4	985	133	220	13500	3970	6.50/20D	8.25/20	Own	6-3⅜x4½	242	5.6	175	85-3000	4-2½x5⅜	Y	Cla 200V61	5	Own	SF	H	5.66-6.33	Own	O4IHV	322	502	a	TX	57 11/16	8 3/32x2 21/32x7/32	CX
171	(1)....... RH45	2-4	985	133	220	13500	4100	7.00/20D	8.25/20	Own	6-3⅜x4½	242	5.6	175	85-3000	4-2½x5⅜	Y	Cla 200V61	5	Own	SF	H	5.66 6.33	Own	O4IHV	322	502	a	TX	57 11/16	8 3/32x2 21/32x7/32	CX
172	(1)....... RL50	2-4	1935	152	205	20000	5645	32x6D	9.75/20	Own	6-3¾x5	331	5.2	230	100-2800	7-3x12 19/32	Y	Cla 200V87	5	Tim	SF	H	6.16-7.40	Tim	O4IHV	421	685	a	TX	66 3/16	8 3/32x2⅞x3/16	CX
173	(1)*(c.o.e.) RO55	2-4	2345	96	140	20000	5695	32x6D	9.75/20	Own	6-3¾x5	331	5.2	230	100-2800	7-3x12 19/32	Y	Cla 200V87	5	Tim	SF	H	6.16-7.40	Tim	O4IHV	421	685	a	TX	76 11/16	8 3/32x2⅞x3/16	CX
174	(1)....... RK60	3-5½	1935	152	205	20000	5775	8.25/20D	9.75/20	Own	6-3¾x5	331	5.2	230	100-2800	7-3x12 19/32	Y	Cla 200V87	5	Tim	SF	H	6.16-7.40	Tim	O4IHV	421	685	a	TX	66 3/16	8 3/32x2⅞x3/16	CX
175	(1)*(c.o.e.) RP65	3-5½	2345	96	140	20000	5825	8.25/20D	9.75/20	Own	6-3¾x5	331	5.2	230	100-2800	7-3x12 19/32	Y	Cla 200V87	5	Tim	SF	H	6.16-7.40	Tim	O4IHV	421	685	a	TX	76 11/16	8 3/32x2⅞x3/16	CX
♦176	.... (22)' ..RXC	....	(23)	116	116	4550	2050	6.00/16D	6.00/16S	Own	6-3⅜x4 1/16	218	5.8	146	71-3000	4-2½x5⅜	N	NP 36220	3	Own	Hy½	H	3.5-4.78	Own	O4IH	148	251	C	TX	37 11/16	6x2x⅛	C
♦177	...(22) RXD-20	....	(23)	120	136	6300	2600	7.00/16D	7.50/16S	Own	6-3⅜x4 1/16	218	5.8	146	71-3000	4-2½x5⅜	N	NP 36280	3	Own	S½	H	3.9-4.78	Own	O4IH	182	301	a	TX	41 11/16	6⅛x2 1/16x3/16	C
♦178	...(22) RXE-30	....	(23)	126	159	11100	3375	7.00/20D	7.00/20	Own	6-3⅜x4 1/16	218	5.8	150	73-3000	4-2½x3⅜	N	NP 36300	4	Own	SF	H	4.87-5.4	Own	O4IH	190	310	a	TX	51 3/16	6 11/16x2 21/32x3/16	CX
♦179	...(22) RXF-35	....	(23)	126	190	13500	3825	32x6D	32x6	Own	6-3⅜x4¼	228	5.8	158	78-3000	4-2½x5⅜	N	NP 36310	4	Own	SF	H	5.6-6.3	Own	O4IH	263	406	a	TX	51 3/16	7x2 21/32x7/32	CX
♦180	...(22) RXF-39	....	(23)	182	182	13500	4200	7.50/20D	7.50/20	Own	6-3⅜x4 1/16	228	5.8	158	78-3000	4-2½x5⅜	N	NP 36310	4	Own	SF	H	5.6-6.3	Own	O4IH	263	406	a	TX	146	8 3/32x2 21/32x½	....

† Rear 32 x 6. †† Rear 7.50/16. ** Rear 32 x 7. (1) Dodge—"Ready to Run." Delivered at Factory Price. Includes all Federal Taxes but does not include any state and/or local taxes. * Chassis & Cab price. ♦ Denotes New Models or Change in Specifications.

For abbreviations see page 269

Line Number	MAKE AND MODEL	GENERAL (See Keynote) Tonnage Rating	Chassis Price	Standard Wheelbase	Max. W. B. Furnished	Gross Vehicle Weight with Max. Tires	Chassis Wt. (Stripped)	TIRE SIZES (D-dual rear S-single rear) Standard Front and Rear	Maximum Tire Size Furnished	ENGINE DETAILS Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings Number, Diameter and Length	Governor Standard	TRANS-MISSION Make and Model	Forward Spd's	REAR AXLE Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	FRONT AXLE Make and Model	BRAKES SERVICE Make Location Type Operat'n	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimension (Std. W. B.)	FRAME Side Rail Dimensions	Type
	Dodge (Con't.)																															
♦ 1	...(22) RXH-45	....	(23)	133	220	16850	4600	34x7D	34x7	Own	6-3⅜x4½	242	5.6	175	85-3000	4-2½x5⅜	Y	Cla 200V61	5	Own	SF	H	5.6-6.3	Own	O4IHV	322	502	a	TX	57 11/16	8 3/32x2 25/32x 7/32	CX
♦ 2	...(22) RXK-60	....	(23)	152	205	23000	6350	10.50/20D	10.50/20	Own	6-3¾x5	331	5.2	230	100-2800	7-2x12 19/64	Y	Cla 200V87	5	Tim	SF	H	6.16-7.4	Tim	O4IHV	421	685	a	TX	66 5/32	8 9/32x2⅞x 5/16	CX
♦ 3	...(D)(22)RZ-65	....	(23)	133	220	15000	4900	7.00/20D	7.00/20	Her DJXC	6-3¾x4½	298	14.	178	77-2600	7-3x10 7/32	Y	Cla 200V61	5	Own	SF	H	5.6-6.3	Own	O4IHV	322	502	a	TX	57 11/16	8 3/32x2 25/32x 7/32	CX
4	Duplex..........S	....	3860	166	Op	21000	6800	8.25/20D	9.00/20	Bud K325	6-3 11/16x4¾	330	4.5	213	87-2800	7-3rx11½	Y	BL 2352	5	Tim 65200	WF	H	5.9-8.4	Shu 5572	L4IHV	399	485	a	TD	79	7x¼x3½	C
5	............SC	....	4300	166	Op	22000	7300	9.00/20D	9.75/20	Bud K369	6-4 1/16x4¾	369	4.5	234	99-2800	7-3x11½	Y	BL 3353	..	Wis 72200	WF	H	5.6-8.0	Shu 5572	L4IHV	399	485	a	TD	79	7x3½x¼	C
6	............SAC	....	4800	172	Op	25500	7900	9.75/20D	10.50/20	Bud K428	6-4⅜x4¾	428	4.5	280	105-2400	7-3rx11½	Y	BL 3353	5	Tim 75733	w/2F	R	6.8-9.4	Shu 5572	L4IHV	504	605	a	TD	85	7x¼x3½	C
7	............SAK	....	5200	172	Op	30000	8550	10.50/20D	11.25/20	Bud K428	6-4⅜x4¾	428	4.5	280	105-2400	7-3x11½	Y	BL 3353	5	Tim 76733	w/2F	R	6.0-9.2	Shu 5572	L4IHV	554	666	a	TD	85	7x¼x3½	C
8	............K	....	5650	172	Op	32000	9000	10.50/20D	11.25/20	Bud L525	6-4½x5½	525	4.5	336	111-2200	7-3x11½	Y	BL 5351	5	Tim 76733	w/2F	R	6.0-9.2	Shu 637	L4IHV	554	666	a	TD	85	8x¼x3½	C
9	L	....	9600	184	Op	40500	10500	11.25/24D	12.50/24	Bud LO525	6-4½x5½	525	...	385	135-2400	7-3x11½	Y	BL 7341	12	Tim 79733W	W/2	R	7.97-12.1	Shu 639	Ws4IA	...	....	c	TD	98	10 1/16x3½x 5/16	C
♦ 10	Esco..........238	2-2½	2860	165	190	15000	5900	8.25/20D	8.25/20	Con E603	6-4¼x4½	383	4.6	250	95-2500	7-2⅝x12 31/32	Y	Cla 270V	5	Cla B642	SF	H	6.42-7.16	Cla F308	L4IHV	350	578	a	CD	82	6x3x¼	CX
♦ 11	..........238-H	2½-3	3100	182	215	17000	7100	9.00/20D	9.00/20	Con E603	6-4¼x4½	383	4.6	250	95-2500	7-2⅝x12 31/32	Y	Cla 270V	5	Cla B805	SF	H	7.16-6.42	Cla F320	L4IHV	393	659	A	CD	82	6x3x¼	PX
♦ 12	338	3	3450	190	215	18000	7700	9.00/20D	9.00/20	Con 21R	6-4⅜x4¾	428	4.6	308	118-2400	7-2¾x13 1/16	N	Fu 5A53	5	Cla B805	SF	H	5.75-7.16	Cla F320	L4IHV	393	659	a	CD	107	6x3x 5/16	PX
13	Fageol.....106BK	1½-2½	1340	156	169	12500	4400	6.50/20D	7.50/20	Wau 6BK	6-3¾x4¼	282	5.1	190	82-2800	7-2⅝x10¼	N	WG T9	4	Tim 53300H	BF	H	4.56- 6.6	Tim 30000H	L4IH	272	380	G	TX	76	8x3x¼	T
14	........135BK	2-3	1628	169	183	15000	5100	7.50/20D	8.25/20	Wau 6BK	6-3¾x4¼	282	5.1	190	82-2800	7-2⅝x10¼	N	WG T9	4	Tim 54411H	BF	H	4.56- 6.8	Tim 31000H	L4IH	355	578	G	TX	89½	8x3x¼	T
15	........250BK	2½-4	2275	183	196	19500	5900	8.25/20D	9.00/20	Wau 6BK	6-3¾x4¼	282	5.1	190	82-2800	7-2⅝x10¼	N	WG T9	4	Tim 56410H	BF	H	4.44- 7.4	Tim 33020H	L4IHV	355	578	G	TX	102¼	8x3x¼	T
16	........250MK	2½-4	2540	188	201	19500	6175	8.25/20D	9.00/20	Wau 6MK	6-4⅛x4¾	381	4.4	240	82-2200	7-2⅝x12½	N	BL 3341	4	Tim 56410H	BF	H	4.44- 7.4	Tim 33020H	L4IHV	355	578	G	TX	102¼	8x3x¼	T
17	........250RA	2½-4	2700	188	201	20700	6400	8.25/20D	9.00/20	Wau 6MK	6-4⅛x4¾	381	4.4	240	82-2200	7-2⅝x12½	N	BL 3341	4	Tim 58200H	BF	H	5.56- 7.8	Tim 33020H	L4IHV	398	659	G	TX	103¼	8x3x¼	T
18	........300HP	3-5	3275	188	201	22000	7150	9.00/20D	9.75/20	Wau 6-110	6-4x4¾	358	5.2	254	110-2800	7-2⅞x12½	Y	BL 5241	4	Tim 58200H	BF	R	5.56- 7.8	Tim 35020H	L4IHV	398	659	G	FD	103¼	8x3x¼	T
19	........300RA	3-5	3560	188	201	26300	7650	9.00 20D	9.75 20	Wau 6-110	6-4x4¾	358	5.2	254	110-2800	7-2⅞x12½	Y	BL 5241	4	Tim 65725H	w/2F	R	6.0-9.25	Tim 35020H	L4IHV	484	768	G	FD	103¼	8x3x¼	T
20	........370HP	5-6	4950	202	218	26300	9150	9.75/20D	10.50/20	Wau 6-125	6-4⅜x5⅛	462	5.2	324	125-2600	7-3x13⅞	Y	BL 5341	4	Tim 65725H	w/2F	R	6.0-9.25	Tim 35000H	L4IHV	484	768	G	FD	116¾	10⅜x3½x¼	T
21	........370RA	5-6	5200	202	218	32000	9400	9.75/20D	10.50/20	Wau 6-125	6-4⅜x5⅛	462	5.2	324	125-2600	7-3x13⅞	Y	BL 5341	4	Tim66720DH	w/2F	R	6.0-9.25	Tim 35000H	L4IHV	663	768	G	FD	116¾	10⅜x3½x¼	T
22	(D).......370D	5-6	7000	213	229	26300	10250	9.75/20D	10.50/20	Cum 6HB	6-4⅞x6	672	17.	500	150-1800	7-4½x16½	Y	BL 7341	4	Tim 65725H	w/2F	R	6.0-9.25	Tim 26450H	L4IHV	484	768	G	FD	117¾	10⅜x3½x¼	T
23	(D)....370RAD	5-6	7250	213	229	32000	10500	9.75/20D	10.50/20	Cum 6HB	6-4⅞x6	672	17.	500	150-1800	7-4½x16½	Y	BL 7341	4	Tim66720DH	w/2F	R	6.0-9.25	Tm 26450H	L4IHV	663	768	G	FD	117¾	10⅜x3½x¼	T
24	..........370C	5-6	5200	202	218	30000	10900	9.75/20D	10.50/20	Wau 6-125	6-4⅜x5⅛	462	5.2	324	125-2600	7-3x13⅞	Y	BL 5341	4	Own	CD	R	6.32-7.59	Tim 35000H	L4IHV	484	768	G	FD	116¾	10⅜x3½x¼	T
25	.....(D) 370DC	5-6	7250	213	229	33000	12200	9.75/20D	10.50/20	Cum 6HB	6-4⅞x6	672	17.	500	150-1800	7-4½x16½	Y	BL 7341	4	Own	CD	R	6.32-7.59	Tim 26450H	L4IHV	538	768	G	FD	117¾	10⅜x3½x¼	T
♦ 26	Fargo..(22) FXG1	....	(23)	116	116	4550	2050	6.00/16D	6.00/16S	Own	6-3⅜x4 1/16	218	5.8	146	71-3000	4-2½x5⅜	N	NP 36220	3	Own	Hy½	H	3.5-4.78	Own	O4IH	148	251	C	TX	37 11/16	6x2x⅛	C
♦ 27	.....(22) FXG2	....	(23)	120	136	6300	2600	7.00/16D	7.50/16S	Own	6-3⅜x4 1/16	218	5.8	146	71-3000	4-2½x5⅜	N	NP 36280	3	Own	S½	H	3.9-4.78	Own	O4IH	182	301	a	TX	41 11/16	6⅛x2 1/16x 3/16	C
♦ 28	.....(22) FXG3	....	(23)	126	159	11100	3375	7.00/20D	7.00/20	Own	6-3⅜x4 1/16	218	5.8	150	73-3000	4-2½x5⅜	N	NP 36300	4	Own	SF	H	4.87-5.4	Own	O4IH	190	310	a	TX	51 3/16	6 15/16x2 21/64x 3/16	CX
♦ 29	.....(22) FXG4	....	(23)	126	190	13500	3825	32x6D	32x6	Own	6-3⅜x4 1/16	228	5.8	158	78-3000	4-2½x5⅜	N	NP 36310	4	Own	SF	H	5.6-6.3	Own	O4IH	263	406	a	TX	51 3/16	7x2 23/64x 7/32	CX
♦ 30	....(22) FXGD4	....	(23)	182	182	13500	4200	7.50/20D	7.50/20	Own	6-3⅜x4 1/16	228	5.8	158	78-3000	4-2½x5⅜	N	NP 36310	4	Own	SF	H	5.6-6.3	Own	O4IH	263	406	a	TX	146	8 5/32x2 25/64x½	....
♦ 31	.....(22) FXG6	....	(23)	133	220	16850	4500	34x7D	34x7	Own	6-3⅜x4½	242	5.6	175	85-3000	4-2½x5⅜	Y	Cla 200V61	5	Own	SF	H	5.6-6.3	Own	O4IHV	322	502	a	TX	57 11/16	8 3/32x2 25/32x 7/32	CX
♦ 32	......(22a) FG1	....	(23)	116	116	4000	2060	6.00/16D	6.00/16S	Own	6-3⅜x4 1/16	218	5.8	146	71-3000	4-2½x5⅜	N	NP 36220	3	Own	Hy½	H	3.5-4.78	Own	O4IH	148	251	C	TX	37 11/16	6x2x⅛	C
♦ 33	......(22a) FG2	....	(23)	120	136	6000	2580	7.00/16D	7.50/16S	Own	6-3⅜x4 1/16	218	5.8	146	71-3000	4-2½x5⅜	N	NP 36280	3	Own	S½	H	3.9-4.78	Own	O4IH	182	301	a	TX	41 11/16	6⅛x2 1/16x 3/16	C
♦ 34	......(22a) FG3	....	(23)	126	159	9500	3015	6.00/20D	32x6S	Own	6-3⅜x4 1/16	218	5.8	150	73-3000	4-2½x5⅜	N	NP 36300	4	Own	SF	H	4.87-5.4	Own	O4IH	190	310	a	TX	51 3/16	6 15/16x2 21/64x 3/16	CX
♦ 35	......(22a) FG4	....	(23)	126	190	11500	3340	6.00/20D	32x6S	Own	6-3⅜x4 1/16	228	5.8	158	78-3000	4-2½x5⅜	N	NP 36310	4	Own	SF	H	5.6-6.3	Own	O4IH	263	406	a	TX	51 3/16	7x2 23/64x 7/32	CX
♦ 36	....(22a) FGD4	....	(23)	183	182	11500	4200	7.50/20D	7.50/20	Own	6-3⅜x4 1/16	228	5.8	158	78-3000	4-2½x5⅜	N	NP 36310	4	Own	SF	H	5.6-6.3	Own	O4IH	263	406	a	TX	146	8 5/32x2 25/64x½	....
♦ 37	......(22a) FG6	....	(23)	133	220	13500	4100	7.00/20D	7.00/20	Own	6-3⅜x4½	242	5.6	175	85-3000	4-2½x5⅜	Y	Cla 200V61	5	Own	SF	H	5.6-6.3	Own	O4IHV	322	502	a	TX	57 11/16	8 5/32x2 25/32x 7/32	CX
♦ 38	.(D) (22a) FGZ6	....	(23)	133	220	15000	4900	7.00/20D	7.00/20	Her DJXC	6-3¾x4½	298	14.	178	77-2600	7-3x10 7/32	Y	Cla 200V61	5	Own	SF	H	5.6-6.3	Own	O4IHV	322	502	a	TX	57 11/16	8 5/32x2 25/64x½	CX
39	Federal.........9	¾-1	695	105	121	.....	2850	6.00/20S	6 00/20	Con F4140	4-3 3/16x4⅜	140	6.0	107	52-2500	3-2¼x4 11/16	N	WG T9	4	Tim 53503H	SF	H	5.14-7.2	Tim 30020H	L4IH	270	388	a	TX	35⅞	6 15/16x2⅞x 3/16	T
40	10	¾-1½	645	128	152	.....	2950	6.00/20S	6.00/20	Her OOB	4-3¾x4½	199	5.3	127	50-2500	3-2x7 1/16	N	WG T9	4	Tim 53503H	SF	H	5.14-6.2	Tim 30020H	L4IH	270	388	a	TX	51⅝	7x2⅞x 7/32	T
41	11	¾-1½	655	127	152	.....	2950	6.00/20S	6.00/20	Her QXB3	6-3¼x4⅛	205	5.2	134	57-2500	7-2½x10 1/16	N	WG T9	4	Tim 53503H	SF	H	5.14-6.2	Tim 30020H	L4IH	270	388	a	TX	51⅝	7x2⅞x 7/32	T
42	............11H	1-1½	695	127	164	.....	3500	6.00/20S	7.00/20	Her QXB3	6-3¼x4⅛	205	5.2	134	57-2500	7-2½x10 1/16	N	WG T9	4	Tim 53521H	SF	H	5.66-6.6	Tim 30020H	L4IH	264	402	a	TX	51⅝	7x2⅞x 7/32	T
43	15	1½-2½	755	135	194	.....	4230	6.00/20†S	7.50/20	Her JXA	6-3⅜x4¼	228	5.3	155	70-2800	7-2½x10 13/16	Y	WG T9	4	Tim 53300H	SF	H	5.14-6.2	Tim 30000H	L4IH	264	402	a	TX	56¾	8½x2⅞x¼	T
44	............15H	1½-3	995	135	194	.....	4650	6.50/20D	8.25/20	Her JXA	6-3⅜x4¼	228	5.3	155	70-2800	7-2½x10 13/16	Y	WG T9	4	Tim 54411H	SF	H	5.83-6.8	Tim 30000H	L4IHV	338	528	a	TX	56¾	8½x2⅞x¼	T
45	18	2-3	995	135	194	.....	4340	6.50/20D	8.25/20	Her JXB	6-3⅝x4¼	263	5.4	183	80-2800	7-2½x10 13/16	Y	WG T9	4	Tim 53393H	SF	H	5.83-6.8	Tim 30003H	L4IHV	268	452	a	TX	56¾	8½x2⅞x¼	T
46	............18H	2-3½	1180	135	194	.....	4750	7.00/20D	8.25/20	Her JXB	6-3⅝x4¼	263	5.4	183	80-2800	7-2½x10 13/16	Y	WG T9	4	Tim 54411H	SF	H	5.83-6.8	Tim 30003H	L4IHV	342	578	a	TX	56¾	8½x2⅞x¼	T
47	20	2-3½	1120	135	194	.....	4440	6.50/20D	8.25/20	Her JXB	6-3⅝x4¼	263	5.4	183	80-2800	7-2½x10 13/16	Y	WG T9	4	Tim 53397H	SF	H	5.83-6.8	Tim 31000H	L4IHV	313	527	a	TX	56¾	8½x2⅞x¼	T
48	............20H	2-4	1290	135	194	.....	4850	7.00/20D	9.00/20	Her JXB	6-3⅝x4¼	263	5.4	183	80-2800	7-2½x10 13/16	Y	WG T9	4	Tim 54411H	SF	H	5.83-6.8	Tim 31000H	L4IHV	342	578	a	TX	56¾	8½x2⅞x¼	T
49	25	2½-4	1395	135	194	.....	5220	7.00/20D	9.00/20	Her JXC	6-3¾x4¼	282	5.4	195	85-2800	7-2½x10 13/16	Y	Cla 185F	4	Tim 54411H	SF	H	5.83 6.8	Tim 31000H	L4IHV	342	578	a	TX	56¾	8½x2⅞x¼	T
50	............25H	2½-4½	1565	135	194	.....	5550	7.50/20D	9.00/20	Her JXC	6-3¾x4¼	282	5.4	195	85-2800	7-2½x10 13/16	Y	Cla 185F	4	Tim 56411H	SF	H	6.16-7.4	Tim 31000H	L4IHV	386	659	a	TX	56¾	8½x2⅞x¼	T
51	29	3-4½	1850	135	194	.....	5660	7.50/20D	9.00/20	Her JXD	6-4x4¼	320	5.6	225	95-2800	7-2½x10 13/16	Y	Cla 200V	5	Tim 56411H	SF	H	6.16-7.4	Tim 32501H	L4IHV	386	659	a	TX	56¾	8½x2⅞x¼	T
52	............29H	3-5	2050	135	194	.....	6000	8.25/20D	9.00/20	Her JXD	6-4x4¼	320	5.6	225	95-2800	7-2½x10 13/16	Y	Cla 200V	5	Tim 58300H	SF	H	6.83-7.8	Tim 32501H	L4IHV	386	659	a	TX	56¾	8½x2⅞x¼	T
53	40	4-5	2775	157	219	.....	7200	9.00/20D	10.50/20	Wau 6MK	6-4⅛x4¾	381	6.5	273	98-2400	7-2⅝x12½	Y	Cla 270V	5	Tim 58300H	SF	H	5.57-7.8	Tim 33000H	L4IHV	386	659	a	TX	82	10⅛x3½x 5/16	T
54	..........40DR	4-5	2950	157	219	.....	7200	9.00/20D	10.50/20	Wau 6MK	6-4⅛x4¾	381	6.5	273	98-2400	7-2⅝x12½	Y	Cla 270V	5	Wis 72300H	2F	H	5.61-7.27	Tim 33000H	L4IHV	386	659	a	TX	82	10⅛x3½x 5/16	T
55	50	5-6	3375	157	219	.....	7900	9.00/20D	10.50/20	Wau 6MZ	6-4¼x4¾	404	6.0	292	105-2400	7-2⅝x12½	Y	Cla 270V	5	Tim 75733H	2F	R	6.85-9.41	Tim 35000H	L4IHV	477	768	a	FD	82	10⅛x3½x 5/16	T
56	............50H	5-7½	3855	157	219	.....	8300	9.75/20D	10.50/20	Wau 6MZ	6-4¼x4¾	404	6.0	292	105-2400	7-2⅝x12½	Y	Cla 270V	5	Tim 76736H	2F	R	7.35-10.2	Tim 35000H	L4IHV	477	768	a	FD	82	10⅛x3½x 5/16	T
57	........C7-C7W	6-7½	4710	195	249	.....	10000	9.75/20D	10.50/24	Wau 6SRK	6-4⅝x5⅛	517	4.6	350	115-2200	7-3x13⅞	Y	Cla B710	5	Tim 76736H	w/2f	R	7.35-10.2	Tim 36020H	L4IHV	512	867	a	TD	102	7⅝x3½x 5/16	P
58	........C8-CSW	6-7½	5120	195	249	.....	10200	9.75/20D	10.50/24	Wau 6SRK	6-4⅝x5⅛	517	4.6	350	115-2200	7-3x13⅞	Y	Cla B710	5	Tim 76736W	w/2f	R	7.35-10.2	Tim 36020W	Ws4IA	609	921	a	TD	102	7⅝x3½x 5/16	P
59	............C8H	7½	5950	185	249	.....	11200	10.50/24D	11.25/24	Wau 6SRK	6-4⅝x5⅛	517	4.6	350	115-2200	7-3x13⅞	Y	Cla B710	5	Tim 79733W	2F	R	8.75-11.2	Tim 36020W	Ws4IA	737	1050	a	TD	92	7⅝x3½x 5/16	P
60	....(c.o.e.) 75	1½-2½	960	104	159	.....	4280	6.00/20†S	7.50/20	Her JXA	6-3⅜x4¼	228	5.3	155	70-2800	7-2½x10 13/16	Y	WG T9	4	Tim 53300H	SF	H	5.14-6.2	Tim 31100H	L4IH	264	402	a	TX	60	8½x2⅞x¼	T
61	...(c.o.e.) 75H	1½-3	1190	104	159	.....	4700	6.50/20D	8.25/20	Her JXA	6-3⅜x4¼	228	5.3	155	70-2800	7-2½x10 13/16	Y	WG T9	4	Tim 54411H	SF	H	5.83-6.8	Tim 31100H	L4IHV	338	528	a	TX	60	8½x2⅞x¼	T
62	....(c.o.e.) 80	2-3½	1265	104	159	.....	4500	6.50/20D	8.25/20	Her JXB	6-3⅝x4¼	263	5.4	183	80-2800	7-2½x10 13/16	Y	WG T9	4	Tim 53397H	SF	H	5.83-6.8	Tim 31102H	L4IHV	313	527	a	TX	60	8½x2⅞x¼	T
63	...(c.o.e.) 80H	2-4	1435	104	159	.....	4900	7.00/20D	9.00/20	Her JXB	6-3⅝x4¼	263	5.4	183	80-2800	7-2½x10 13/16	Y	WG T9	4	Tim 54411H	SF	H	5.83-6.8	Tim 31102H	L4IHV	342	578	a	TX	60	8½x2⅞x¼	T
64	....(c.o.e.) 85	2½-4	1555	104	159	.....	5280	7.00/20D	9.00/20	Her JXC	6-3¾x4¼	282	5.4	195	85-2800	7-2½x10 13/16	Y	Cla 185F	4	Tim 54411H	SF	H	5.83-6.8	Tim 32502H	L4IHV	342	578	a	TX	60	8½x2⅞x¼	T
65	...(c.o.e.) 85H	2½-4½	1725	104	159	.....	5600	7.50/20D	9.00/20	Her JXC	6-3¾x4¼	282	5.4	195	85-2800	7-2½x10 13/16	Y	Cla 185F	4	Tim 56411H	SF	H	6.16-7.4	Tim 32502H	L4IHV	386	659	a	TX	60	8½x2⅞x¼	T
66	....(c.o.e.) 89	3-4½	2000	104	159	.....	5720	7.50/20D	9.00/20	Her JXD	6-4x4¼	320	5.6	225	95-2800	7-2½x10 13/16	Y	Cla 200V	5	Tim 56411H	SF	H	6.16-7.4	Tim 32502H	L4IHV	386	659	a	TX	60	8½x2⅞x¼	T
67	...(c.o.e.) 89H	3-5	2200	104	159	.....	6050	8.25/20D	9.00/20	Her JXD	6-4x4¼	320	5.6	225	95-2800	7-2½x10 13/16	Y	Cla 200V	5	Tim 58300H	SF	H	6.83-7.8	Tim 32502H	L4IHV	386	659	a	TX	60	8½x2⅞x¼	T
♦ 68	Ford.....(4) 817T	1½	615	157	191	.....	3620	6.00/20†S	7.50/20	Own	8-3 1/16x3¾	221	6.12	150	85-3800	3-2.4x4.68	N	Own	4	Own	FS	..	5.14-6.67	Own	O4IM	368	526	a	2I	83 1/16	7x2¾x.21	C
♦ 69	......(4) 81T	1½	590	134	134	.....	3600	6.00/20†S	7.50/20	Own	8-3 1/16x3¾	221	6.12	150	85-3800	3-2.4x4.68	N	Own	4	Own	FS	..	5.14-6.67	Own	O4IM	368	526	a	2I	60 1/16	7x2¾x.21	C
♦ 70	......(5) 81Y	1	575	122	122	.....	2930	6.50/17°S	7.50/17	Own	8-3 1/16x3¾	221	6.12	150	85-3800	3-2.4x4.68	N	Own	3	Own	FS	..	**-4.11	Own	O4IM	277	409	a	4I	48 1/16	6x2¼x.19	C
♦ 71	......(5) 82Y	1	565	122	122	.....	2730	6.50/17°S	7.50/17	Own	8-2.6x3.2	136	6.6	94	60-3500	3-2x4.33	N	Own	3	Own	FS	..	**-6.67	Own	O4IM	277	409	a	4I	48 1/16	6x2¼x.19	C
♦ 72	(5a) Comm. 81C	....	465	112	112	.....	2230	6.00/16S	6.50/16	Own	8-3 1/16x3¾	221	6.12	150	85-3800	3-2.4x4.68	N	Own	3	Own	S¾	..	3.78-4.11	Own	O4IM	186	293	a	4I	67	5½x2x.11	TIx
♦ 73	(5a) Comm. 82C	....	455	112	112	.....	2030	6.00/16S	6.50/16	Own	8-2.6x3.2	136	6.6	94	60-3500	3-2x4.33	N	Own	3	Own	S¾	..	**-4.44	Own	O4IM	186	293	a	4I	67	5½x2x.11	TIx
74	Gen...(6) (N) T-14	½	445	112	126	.....	2410	6.00/16S	15-7.50S	Own 223	6-3 7/16x4	223	6.2	...	81-3400	4-2½rx5⅜	N	Own	3	Own	S½	U	**-4.11	Own	O4IH	168	242	c	2I	38¼	5¾x2¼x⅛	C
75	.........T-145	¾	515	126	...	.....	2550	7.00/15S	15-7.50S	Own 223	6-3 7/16x4	223	6.2	...	81-3400	4-2½rx5⅜	N	Own	3	Own	S½	U	**-4.11	Own	O4IH	168	242	c	2I	52¼	5¾x2¼x⅛	C
76	.........T-15	1	545	131	...	.....	2745	7.00/17S	7.50/17S	Own 223	6-3 7/16x4	223	6.2	...	81-3400	4-2½rx5⅜	N	Own	3	Own	S½	U	**-4.11	Own	O4IH	200	297	c	2I	57¾	6 13/16x2⅝x⅛	C
77	.........T-155	1-1½	565	131	...	.....	2960	7.50/16S	7.00/16	Own 223	6-3 7/16x4	223	6.2	...	81-3400	4-2½rx5⅜	N	Own	3	Own	SF	H	4.57-5.14	Own	O4IH	200	297	cC	2I	57¾	6 13/16x2⅝x⅛	T
78	.........T-16	1½-3	585	131	157	.....	3490	6.00/20†S	7.50/20	Own 230	6-3 7/16x4⅛	230	6.2	172	86-3500	4-2 11/16rx5⅜	N	Own	4	Own	SF	H	5.67-6.20	Own	O4IH	337	478	C	2I	57¾	7x2⅞x 5/32	T
79	.........T-16H	1½-3	805	130	174	.....	3985	6.00/20†S	7.50/20	Own 230	6-3 7/16x4⅛	230	6.2	172	86-3500	4-2 11/16rx5⅜	N	Own	4	Own	SF	H	5.67-6.60	Own	LO4IH	349	478	C	2I	57¾	8x2⅞x 5/32	T
80	.........T-18	1½-4	965	136	178	.....	4560	6.00/20D	8.25/20	Own 239	6-3 7/16x4⅝	239	5.1	175	81-3000	4-2⅝x7⅜	Y	Own	4	Own	SF	H	5.67-6.60	Own	LO4IH	352	483	CN	TX	60	8x3x¼	T
81	.........T-18H	1½-4½	1140	136	178	.....	4940	6.50/20D	34x7	Own 239	6-3 7/16x4⅝	239	5.1	175	81-3000	4-2⅝x7⅜	Y	Own	4	Own	SF	H	5.83-6.80	Own	L4IH	342	534	CN	TX	60	8x3x¼	T

† Rear 32 x 6 ° Rear 7.00/17

81	T-18H	1½-4½	1140	136	178	....	4940	6.50/20D	34x7	Own 239	6-3 5/16x4⅝	239	5.1	175	81-3000	4-2⅜x7 23/32	Y	Own	4	Own	SF	H	5.83-6.80	Own	L4IH	342	534	CN	TX	60	8x3x¼	T
82	T-23	2-4½	1440	136	196	....	5320	7.00/20D	34x7	Own 257	6-3 7/16x4⅝	257	5.0	190	87-2800	4-2⅜x7 23/32	Y	Own	4	Own	SF	H	5.83-6.80	Own	L4IHV	342	534	CN	TX	60	8x3x¼	T
83	T-23H	2-5	1735	136	196	....	5665	7.50/20D	9.00/20	Own 257	6-3 7/16x4⅝	257	5.0	190	87-2800	4-2⅜x7 23/32	Y	Own	4	Own	SF	H	5.63-7.20	Own	L4IHV	386	613	CN	TX	60	8x3x¼	T
84	T-33	2½-6	2010	136	196	....	6210	7.50/20D	9.75/20	Own 286	6-3⅝x4⅝	286	4.9	205	90-2600	4-2⅜x7 23/32	Y	Own	5	Own	SF	H	5.63-7.20	Own	L4IHV	389	663	N	TX	60	8 13/16x3½x¼	T
85	T-33H	2½-6½	2475	136	196	....	6790	8.25/20D	10.50/20	Own 286	6-3⅝x4⅝	286	4.9	205	90-2600	4-2⅜x7 23/32	Y	Own	5	Own	SF	R	6.43-7.16	Own	L4IHV	480	769	N	TX	60	8 13/16x3½x¼	T
86	T-46	3½-7	3235	136	196	....	7705	8.25/20D	10.50/20	Own 331	6-3¾x5	331	4.7	230	94-2500	4-2½x8 7/32	Y	Own	5	Own	SF	R	6.43-7.16	Own	L4IHV	528	849	N	TX	60	9 1/16x3½x5/16	T
87	T-61	4-8	4695	136	196	....	9360	9.00/20D	11.25/20	Own 400	6-4⅛x5	400	4.7	296	110-2300	4-2.7x8 15/32	Y	Own	5	Own	2F	R	7.38-9.41	Own	TW4IA	617	923	N	TX	60	9 1/16x3½x5/16	TL
88	T-61H	5-10	5065	136	196	....	9695	9.00/20D	11.25/24	Own 400	6-4⅛x5	400	4.7	296	110-2300	4-2.7x8 15/32	Y	Own	5	Own	2F	R	7.34-9.19	Own	TW4IA	617	923	N	TX	60	9 1/16x3½x5/16	TL
♦ 89	(c.o.e.) F-16	1½-3½	755	108	155	....	3815	6.00/20†S	7.50/20	Own 230	6-3 7/16x4⅛	230	6.2	172	86-3500	4-2 11/16 rx5 3/16	N	Own	4	Own	SF	H	5.67-6.20	Own	LO4IH	349	478	C	2I	64	7x2⅜x7/32	T
♦ 90	(c.o.e.) F-16H	1½-4	920	108	174	....	4320	6.00/20†S	7.50/20	Own 230	6-3 7/16x4⅛	230	6.2	172	86-3500	4-2 11/16 rx5 3/16	N	Own	4	Own	SF	H	5.67-6.60	Own	LO4IH	349	478	C	2I	64	8x2⅜x7/32	T
91	(c.o.e.) F-18	1½-4½	1110	108	178	....	4655	6.00/20D	8.25/20	Own 239	6-3 5/16x4⅝	239	5.1	175	81-3000	4-2⅜x7 23/32	Y	Own	4	Own	SF	H	5.67-6.60	Own	LO4IH	352	483	CN	TX	64	8x3x¼	T
92	(c.o.e.) F-18H	1½-4½	1285	108	178	....	5130	6.50/20D	34x7	Own 239	6-3 5/16x4⅝	239	5.1	175	81-3000	4-2⅜x7 23/32	Y	Own	4	Own	SF	H	5.83-6.80	Own	L4IH	342	534	CN	TX	64	8x3x¼	T
93	(c.o.e.) F-23	2-5	1615	108	196	....	5720	7.00/20D	34x7	Own 257	6-3 7/16x4⅝	257	5.0	190	87-2800	4-2⅜x7 23/32	Y	Own	4	Own	SF	H	5.83-6.80	Own	L4IHV	345	584	N	TX	64	8x3x¼	T
94	(c.o.e.) F-23H	2-6	1910	108	196	....	6195	7.50/20D	9.00/20	Own 257	6-3 7/16x4⅝	257	5.0	190	87-2800	4-2⅜x7 23/32	Y	Own	4	Own	SF	H	5.63-7.20	Own	L4IHV	389	663	N	TX	64	8x3x¼	T
95	(c.o.e.) F-33	2½-6½	2205	108	196	....	6380	7.50/20D	9.75/20	Own 286	6-3⅝x4⅝	286	4.9	205	90-2600	4-2⅜x7 23/32	Y	Own	5	Own	SF	H	5.63-7.20	Own	L4IHV	437	743	N	TX	64	8 13/16x3½x¼	T
96	(c.o.e.) F-33H	2½-7	2670	108	196	....	6920	8.25/20D	10.50/20	Own 286	6-3⅝x4⅝	286	4.9	205	90-2600	4-2⅜x7 23/32	Y	Own	5	Own	SF	R	6.43-7.16	Own	L4IHV	528	849	N	TX	64	8 13/16x3½x¼	T
97	(c.o.e.) F-46	3½-8	3460	108	196	....	7915	8.25/20D	10.50/20	Own 331	6-3¾x5	331	4.7	230	94-2500	4-2½x8 7/32	Y	Own	5	Own	SF	R	6.43-7.16	Own	L4IHV	511	869	N	TX	64	9 1/16x3½x5/16	T
98	(c.o.e.) F-61	4-10	4920	108	196	....	9540	9.00/20D	11.25/20	Own 400	6-4⅛x5	400	4.7	296	110-2300	4-2.7x8 15/32	Y	Own	5	Own	2F	R	7.38-9.41	Own	TW4IA	617	923	N	TX	64	9 1/16x3½x5/16	TL
99	(c.o.e.) F-61H	5-12	5175	108	196	....	9855	9.00/20D	11.25/24	Own 400	6-4⅛x5	400	4.7	296	110-2300	4-2.7x8 15/32	Y	Own	5	Own	2F	R	7.34-9.19	Own	TW4IA	617	923	N	TX	64	9 1/16x3½x5/16	TL
100	Gramm 15A	1½-2	565	136	220	9500	3000	6.00/20S	7.00/20	Her QXB3	6-3¼x4⅛	205	5.5	135	61-3100	7-2½x10 1/16	N	WG T9	4	Cla R650	SF	H	5.62-6.28	Cla F182	L4IH	210	352	a	TX	55	7 1/16x2¾x7/32	T
101	25A	1½-2	595	136	220	11500	3200	6.00/20S	34x7	Her QXB3	6-3¼x4⅛	205	5.5	135	61-3100	7-2½x10 1/16	N	WG T9	4	Cla R750	SF	H	5.1-6.8	Cla F182	L4IH	240	392	a	TX	55	7 1/16x2¾x7/32	T
102	30A	2-3	625	136	220	12000	3300	6.00/20S	34x7	Her JXA	6-3⅜x4¼	228	5.7	154	66-2800	7-2½x10 13/16	N	WG T9	4	Cla R750	SF	H	5.1-6.8	Cla F266	L4IH	256	432	a	TX	55	7 1/16x2¾x7/32	T
103	40A	2½-3½	745	136	220	13000	3650	6.00/20S	8.25/20	Her JXB	6-3⅝x4¼	263	5.8	168	71-2800	7-2½x10 13/16	N	WG T9	4	Tim 53300	SF	H	4.57-6.6	Cla F266	L4IH	276	442	a	TX	55	7 1/16x2¾x7/32	T
104	45A	2½-4	845	136	220	14000	4000	6.00/20S	8.25/20	Her JXB	6-3⅝x4¼	263	5.8	168	71-2800	7-2½x10 13/16	N	WG T9	4	Tim 54411	SF	H	4.12-6.8	Cla F266	L4IH	360	568	a	TX	55	7 1/16x2¾x7/32	T
105	50A	3-4	1095	136	220	15000	4600	6.50/20D	8.25/20	Her JXB	6-3⅝x4¼	263	5.8	168	71-2800	7-2½x10 13/16	N	WG T9	4	Tim 54411	SF	H	4.12-6.8	Tim 31000	L4IHV	388	578	a	TX	55	10x2¾x11/32	P
106	55A	3-4½	1195	136	220	15000	4700	6.50/20D	8.25/20	Her JXC	6-3¾x4¼	282	5.7	182	76-2800	7-2½x10 13/16	N	Cla 185F	4	Tim 54411	SF	H	4.12-6.8	Tim 31000	L4IHV	388	578	a	TX	55	10x2¾x11/32	P
107	70A	3½-4½	1425	136	220	17000	5200	7.00/20D	9.75/20	Her JXC	6-3¾x4¼	282	5.7	182	76-2800	7-2½x10 13/16	N	Cla 200V	5	Tim 56410	SF	H	4.44-7.4	Tim 31000	L4IHV	388	578	a	TX	55	10x2¾x11/32	P.
108	75A	3½-5	1595	136	220	18000	5300	7.00/20D	9.75/20	Her JXD	6-4x4¼	320	5.7	212	88-2800	7-2½x10 13/16	N	Cla 200V	5	Tim 56410	SF	H	4.44-7.4	Tim 31000	L4IHV	388	578	a	TX	55	10x2¾x11/32	P
109	85A	4-5½	1795	136	220	20000	5700	7.50/20D	10.50/20	Her JXD	6-4x4¼	320	5.7	212	88-2800	7-2½x10 13/16	N	Cla 200V	5	Tim 58200	SF	H	5.25-7.8	Tim 32500	L4IHV	436	660	a	TX	55	10x2¾x11/32	P
110	(D) DJX40A	2½-3½	1995	136	220	13000	3950	6.00/20S	8.25/20	Her DJXB	6-3½x4½	260	14.5	178	77-2600	7-3x10 7/32	Y	Cla 185F	4	Tim 53300	SF	H	4.57-5.66	Cla 266F	L4IH	277	442	a	TX	55	7 1/16x2¾x7/32	T
111	(D) DJX55A	3-4½	2595	136	220	15000	5000	6.50/20D	8.25/20	Her DJXB	6-3½x4½	260	14.5	178	77-2600	7-3x10 7/32	Y	Cla 185F	4	Tim 54411	SF	H	4.12-6.8	Tim 31000	L4IHV	388	578	a	TX	55	10x2¾x11/32	P
112	(D) DJX70A	3½-4½	2845	136	220	17000	5500	7.00/20D	9.75/20	Her DJXB	6-3½x4½	260	14.5	178	77-2600	7-3x10 7/32	Y	Cla 200V	5	Tim 56410	SF	H	4.4-7.4	Tim 31000	L4IHV	388	578	a	TX	55	10x2¾x11/32	P
113	(D) DJX75A	3½-5	2995	136	220	18000	5600	7.00/20D	9.75/20	Her DJXC	6-3¾x4½	298	14.5	194	84-2600	7-3x10 7/32	Y	Cla 200V	5	Tim 56410	SF	H	4.4-7.4	Tim 31000	L4IHV	388	578	a	TX	55	10x2¾x11/32	P
114	(D) DJX85A	4-5½	3195	136	220	20000	6000	7.50/20D	10.50/20	Her DJXC	6-3¾x4½	298	14.5	194	84-2600	7-3x10 7/32	Y	Cla 200V	5	Tim 58200	SF	H	5.25-7.8	Tim 32500	L4IHV	436	660	a	TX	55	10x2¾x11/32	P
115	EY190	3	3595	190	190	16000	6750	7.50/20D	9.00/20	Con 20R	4⅛x4¾	380	4.7	238	88-2400	7-2¾x13 5/16	Y	Co Rus4	4	Tim 58200H	BF	H	4.55*7.8	Tim 32500	L4IHV	375	....	a	TD	90	8¾x3¼x¼	LDX
116	GY	4	4345	190	210	18000	7700	8.25/20D	9.75/20	Con 21R	6-4⅜x4¾	428	4.6	268	100-2200	7-2¾x13 5/16	Y	Co Rus	4	Wis 69317H	2F	H	5.9 *8.4	Tim 32500	L4IHV	375	....	a	TD	119 1/16	8¾x3¼x¼	LDX
117	GF	4-6	5500	150	225	24000	9050	9.75/20D	10.50/20	Her HXC	6-5¼x6	779	4.5	505	143-1600	7-3½x17	N	BL 744	4	Wis 1237H	2F	H	4.29*7.2	Tim 33000	L4IHV	466	....	a	TD	67	12x2½x¼	TP
118	GW	5-7¼	5175	157	240	28000	9500	9.00/20D	11.25/20	Con 21R	6-4⅜x4¾	428	4.1	268	100-2200	7-2¾x13 5/16	Y	Cla R900	5	Wis 1627KW	2F	H	6.3 *8.0	Tim 27450	Ws4IA	576	....	a	TD	73⅞	12x2½x¼	TP
119	(D) GWD	5-7½	6495	157	240	30000	10000	10.50/20D	11.25/20	Cum H Die.	6-4⅞x6	672	17.	440	125-1800	7-3¼x16½	Y	BL 735	5	Wis 1737KW	2F	H	5.75*8.0	Tim 27450	Ws4IA	576	....	a	TD	73⅞	12x2½x¼	TP
120	HY	5	6595	210	236	22000	10100	9.00/20D	9.75/20	Con 16H	6-4¾x5¾	611	4.1	382	127-2300	7-3x13 13/16	Y	Fu HU16	4	Wis12527KW	2F	H	4.00*8.0	Tim 27450	Ws4IA	576	....	a	TD	141⅛	8¾x3¼x¼	LDX
121	Grass-Premier 545	3-4	2400	130	176	18000	5575	7.50/20D	8.25/20	Wau 6BK	6-3¾x4¼	282	5.1	180	85-3200	7-2⅝x10¼	N	Fu 5A290	5	Tim 56200H	SF	R	6.16-7.4	Tim 31000H	L4IHV	328	353	A	TX	58	8x¼x3½	T
122	555	4-5	3600	130	Op	20000	6100	8.25/20D	9.00/20	Wau 6-110-3	6-4x4¾	358	5.2	254	110-2800	7-2⅞x12½	Y	Fu 5A380	5	Tim 58200H	SF	R	6.8-7.8	Tim 33000H	L4IHV	374	397	A	TD	58	9x¼x4	T
123	565	5-7	4400	136	Op	25000	8465	9.00/20D	9.75/20	Wau 6-110-3	6-4x4¾	358	5.2	254	110-2800	7-2⅞x12½	Y	Fu 5A380	5	Eat 2622	2F	R	8.05-9.43	Tim 35000H	L4IHV	398	396	A	TD	60	10x¼x4	T
124	575	7-10	5400	136	Op	30000	9450	9.75/20D	10.50/20	Wau 6-125-4	6-4⅜x5⅛	462	5.1	324	125-2600	7-3x12½	Y	Fu 5A53	5	Wis 1737	2F	R	8.05-9.15	Tim 35000H	L4IHV	453	412	A	TD	60	12x¼x4	T
125	Hahn H-9	1½	990	136	Op	9000	3400	6.00/20S	7.00/20	Wau 6BL	6-3½x4¼	245	5.1	190	72-2800	7-2⅝x10¼	N	WG T9	4	Cla R570	SF	H	**-5.10	Cla F266	L4IH	223	424	A	TX	Opt	5¾x2¼x¼	P
126	H-11	2	1038	136	Op	11000	3700	6.00/20S	7.50/20	Wau 6BL	6-3½x4¼	245	5.1	190	72-2800	7-2⅝x10¼	N	WG T9	4	Cla R750	SF	H	** 5.1	Cla F266	L4IH	223	424	A	TX	Opt	5¾x2¼x¼	P
127	H-13	2	1359	139	Op	13000	4500	6.50/20D	7.50/20	Wau 6BL	6-3½x4¼	245	5.1	190	72-2800	7-2⅝x10¼	N	WG T9	4	Tim 53300H	SF	H	** 6.6	Tim 30000H	L4IH	269	515	A	TX	Opt	5¾x2¼x¼	P
128	H-18	2½	1620	142	Op	18000	5400	7.50/20D	34x7	Wau 6BL	6-3½x4¼	245	5.1	190	72-2800	7-2⅝x10¼	N	Fu 5A330	5	Tim 54412H	SF	H	** 5.8	Tim 31000H	L4IH	355	526	A	TD	Opt	6x2½x¼	P
129	H-22	3	2020	146	Op	20000	6050	8.25/20D	9.00/20	Wau 6BK	6-3¾x4¼	282	5.1	190	82-2800	7-2⅝x10¼	N	Fu 5A330	5	Tim 56410H	SF	H	** 5.14	Tim 32502	L4IH	803	660	A	TD	Opt	7x3x¼	C
130	M-20	3	2860	148	Op	22000	6300	8.25/20D	36x8	Wau 6MZ	6-4¼x4¾	404	4.6	255	90-2500	7-2⅝x12½	Y	Fu 5A430	5	Tim 56410H	SF	H	** 5.14	Tim 32502	L4IH	803	660	A	TD	Opt	7x3x¼	P
131	M-22	3½	3100	150	Op	22000	6700	9.00/20D	9.75/20	Wau 6MZ	6-4¼x4¾	404	4.6	255	90-2500	7-2⅝x12½	Y	Fu 5A430	5	Tim 58205H	SF	H	** 6.8	Tim 35000H	L4IHV	803	660	A	TD	Opt	7x3x¼	P
132	M-25	4	3440	154	Op	25000	7600	9.75/20D	9.75/22	Wau 6MZ	6-4¼x4¾	404	4.6	255	90-2500	7-2⅝x12½	Y	Fu 5A430	5	Tim 58205H	SF	H	** 6.8	Tim 35000H	L4IHV	803	660	A	TD	Opt	8⅛x3x5/16	D
133	M-26	4-6	3640	162	Op	26000	9050	9.75/20D	9.75/22	Wau 6MZ	6-4¼x4¾	404	4.6	255	90-2500	7-2⅝x12½	Y	Fu 5A430	5	Tim 58205H	SF	R	** 6.8	Tim 35000H	L4IHV	660	803	A	TD	Opt	9⅛x3x5/16	D
134	440	5-6	5250	165	Op	26000	9200	9.75/20D	10.50/20	Wau 6SRK	6-4⅝x5⅛	517	4.6	335	110-2000	7-3x13⅞	Y	Fu 5A620	5	Wis 1337BH	2F	R	** 7.2	Tim 35000H	L4IHV	760	820	A	TD	Opt	10x3x5/16	D
135	Hendrickson A-126	2	1575	89	210	12600	5000	6.00/20D	8.25/20	Wau 6BK	6-3¾x4¼	282	5.1	185	85-3200	7-2⅝x10¼	Y	Fu 5A33	5	Cla R950	BF	H	5.57-6.83	Cla F280	L4IH	283	471	C	TX	Opt	8x3x5/16	C
136	A-165	2½	1890	89	210	16500	5400	7.50/20D	9.00/20	Wau 6BK	6-3¾x4¼	282	5.1	185	85-3200	7-2⅝x10¼	Y	Fu 5A33	5	Cla R1100	BF	H	5.66-6.87	Cla F320	L4IHV	350	450	C	TX	Opt	8x3x5/16	C
137	A-210-A	3	2485	89	210	21000	6000	8.25/20D	10.50/20	Wau 6BZ	6-4x4¼	320	5.1	212	87-2800	7-2⅝x10¼	Y	Fu 5A33	5	Cla B805	BF	H	5.75-7.16	Cla F320	L4IHV	500	658	G	TX	Opt	8x3x5/16	C
138	(D) AD-240	3	5500	100	124	24000	9300	9.75/20D	10.50/20	Cum 4HB	4-4⅞x6	448	17.	335	100-1800	5-4½x12	Y	BL 5352	5	Eat 2551	BF	H	**-4.55	Ti 35100TW	W4IA	....	....	G	TD	Opt	9 13/16x4x5/16	C
139	A-210	3½	2840	100	240	21000	6600	8.25/20D	10.50/20	Wau 6-110	6-4x4¾	358	4.6	254	110-2800	7-2⅝x12½	Y	Fu 5A43	5	Cla B805	BF	H	5.75-7.16	Cla F320	L4IHV	500	658	G	TD	Opt	8x3x5/16	C
140	A-290	4	4375	101	240	29000	8200	9.00/20D	10.50/20	Wau 6-110	6-4x4¾	358	4.6	254	110-2800	7-2⅝x12½	Y	Fu 5A43	5	Tim 75733H	2F	H	7.33-9.45	Tim 26450H	L4IHV	717	862	G	TD	Opt	8x3x5/16	P
141	A-390	5	5300	105	240	39000	10600	9.75/20D	10.50/20	Wau 6-125	6-4⅜x5⅛	462	4.6	324	125-2600	7-3x13⅞	Y	Fu 5A62	5	Ti 66725TW	WF	R	6.02-9.20	Ti 27450TW	TW4IA	717	862	G	TD	Opt	8x3x5/16	P
♦142	Hudson (1) 80	¾	597	117	117	4852	2172	6.00/16S	7.00/15S	Own	6-3x5	212	6.2	160	96-3900	3-2⅜x5¾	N	Own	3	Own	S½	H	4.55-5.12	Own	B4IH	154	....	P	2I	32¼	7¼x⅛x1¾	CX
♦143	Terraplane (1) 88	¾	627	124	124	4912	2277	6.00/16S	7.00/15S	Own	6-3x5	212	6.2	160	96-3900	3-2⅜x5¾	N	Own	3	Own	S½	H	5.12-4.55	Own	B4IH	154	....	P	2I	39¼	7¼x⅛x1¾	CX
♦144	Hug 15	1½-2½	(23)	121	159	14000	4600	7.00/20D	9.00/20	Wau 6BL	6-3½x4¼	245	5.4	166	72-3000	7-2⅝x10¼	Y	Cla 185F	4	Cla R950	SF	H	5.57-6.83	Cla F308	L4IH	306	510	a	TX	50	8x3x¼	T
♦145	19	2½-5	(23)	121	159	18000	4830	7.50/20D	9.00/20	Wau 6BK	6-3¾x4¼	282	5.2	185	85-3000	7-2⅝x10¼	Y	Fu 5B330	5	Cla R1300	SF	H	6.42-7.16	Cla F308	L4IHV	399	687	a	TX	50	8x3x¼	T
♦146	42	3-6	(23)	140	198	22000	6660	9.00/20D	9.75/20	Bud K369	6-4 1/16x4¾	369	4.8	234	99-2800	7-3x11½	Y	Fu 5A430	5	Cla B805	SF	H	5.75-7.16	Cla F320	L4IHV	415	687	a	TD	62	8x3x¼	T
♦147	(D) D42	3-6	(23)	140	198	22000	7660	9.00/20D	9.75/20	Bud 6LD415	6-4x5½	415	12	308	105-2200	7-3x11½	Y	Fu 5A620	5	Cla B805	SF	H	5.75-7.16	Cla F320	L4IHV	415	687	a	TD	62	8x3x¼	T
♦148	43	4-8	(23)	100	198	26000	7000	9.75/20D	10.50/20	Bud K428	6-4⅜x4¾	428	4.8	280	107-2600	7-3x11½	Y	Fu 5A620	5	Wis 1337	2F	H	5.63-8.59	Shu 632	L4IHV	620	890	a	TD	62	8x3x¼	T
♦149	(D) D43	4-8	(23)	100	198	26000	8000	9.75/20D	10.50/20	Bud 6LD468	6-4¼x5½	468	12	346	118-2200	7-3x11½	Y	Fu 5A620	5	Wis 1337	2F	H	5.63-8.59	Shu 632	L4IHV	620	890	a	TD	62	8x3x¼	T
♦150	(D) D43L	6-12	(23)	100	198	30000	10500	10.50/20D	11.25/20	Cum HB6	6-4⅞x6	672	17	500	150-1800	7-4½x16	Y	Spi 7351	5	Tim 79721	2F	H	5.34-7.97	Shu 1673	W4IA	618	875	a	TD	62	9⅛x3x5/16	T
♦151	(D) (T) HC	4-6	(23)	113	113	40000	....	9.00/20D	9.75/20	Cat D4600	6-4¼x5½	468	15	274	72-1800	7-3x	Y	Fu 5A620	5	Cla B805	SF	H	5.75-7.16	Shu 632	L4IHV	506	887	a	TD	75	9⅛x3x5/16	T
♦152	3B	3-4	(23)	134	134	22000	....	9.00/20D	9.75/20	Wau 6BZ	6-4x4¼	320	5.1	210	85-2800	7-2⅝x10¼	Y	Fu 5A43	5	Cla B805	SF	H	5.75-7.16	Shu 632	L4IHV	506	887	a	TD	84	7x3¾x11/32	I
♦153	70K	3-4	(23)	134	134	22000	8190	9.00/20D	9.75/20	Bud K369	6-4 1/16x4¾	369	4.8	234	99-2800	7-3x11½	Y	Fu 5A43	5	Wis 1337	2F	T	5.63-8.59	Shu 625	W2MV	331	542	a	TD	84	8x4 21/64x19/32	I
♦154	(D) D70K	3-4	(23)	134	134	22000	9190	9.00/20D	9.75/20	Bud 6LD415	6-4x5½	415	12	308	105-2200	7-3x11½	Y	Fu 5A43	5	Wis 1337	2F	T	5.63-8.59	Shu 625	W2MV	331	542	a	TD	84	8x4 21/64x19/32	I
♦155	87Q	5-7	(23)	134	134	31000	9500	11.25/20D	11.25/20	Bud K428	6-4⅜x4¾	428	4.8	280	107-2600	7-3x11½	Y	Fu 5A62	5	Wis 1910	2F	T	8.88-10.0	Shu 655	W2MV	360	540	a	TD	84	8x4 21/64x19/32	I
♦156	(D) D8 Q	....	(23)	134	134	32000	10500	11.25/20D	11.25/20	Bud 6LD468	6-4¼x5½	468	12	346	118-2200	7-3x11½	Y	Fu 5A62	5	Wis 1910	2F	T	8.88-10.0	Shu 655	W2MV	360	540	a	TD	84	8x4 21/64x19/32	I
♦157	(D) 16	5	(23)	134	134	....	....	11.25/20D	11.25/20	Cat D4600	6-4¼x5½	468	15	274	72-1800	7-3x	Y	Fu 5A62	5	Wis 1910	2F	T	8.88-10.0	Shu 655	W2MV	360	540	a	TD	84	8x4 21/64x19/32	I
♦158	98	7½-10	(23)	144	144	45200	11920	12.00/24D	12.00/24	Wau 6GAL	6-5x5½	648	4.6	468	130-1900	7-4x18⅝	Y	Spi 7341	4	Tim 79740	2F	T	7.9-10.12	Shu 1673	W4IA	727	1138	a	TD	86½	9x4 21/64x5/16	I
♦159	(D) D98	7½-10	(23)	144	144	46200	12920	12.00/24D	12.00/24	Cum HB6	6-4⅞x6	672	17	500	150-1800	7-4½x16	Y	Spi 7341	4	Tim 79740	2F	T	7.9-10.12	Shu 1673	W4IA	727	1138	a	TD	86½	9x4 21/64x5/16	I
♦160	Indiana 86	1½-2	825	136	196	....	3350	6.00/20S	7.50/20	Her JXB	6-3⅝x4¼	263	5.4	164	68-2800	7-2½x10 13/16	Y	WG T9	4	Tim 53300H	SF	H	5.14-6.6	Tim 30020H	L4IH	264	477	G	TX	56⅜	7 13/16x3x5/16	T
161	87	2	955	136	196	....	4000	6.50/20D	8.25/20	Her-JXB	6-3⅝x4¼	263	5.4	164	68-2800	7-2½x10 13/16	Y	WG-T9	4	Tim.54413Al	SF	H	5.85-6.8	Tim 30020H	L4IH	264	477	G	TX	56⅜	7 13/16x3x5/16	T
162	Inter- (8) C1	½	415	113	125	4400	2205	6.00/16S	7.00/15S	Own HD-1	6-3 5/16x4⅛	213	6.4	151	79-3400	4-2⅝x6 11/16	N	Own HDS	3	Own R-56H	S½	H	3.72-4.18	Own F-50½H	B4IH	191	264	c	2I	29¾	5¾x2¼x5/32	T
163	national C-5	½	415	113	125	4400	2100	6.00/16S	7.00/15	Wau FC132	4-3¼x4	133	1.	89	33-2700	3-2¼x4½	N	Own HDS	3	Own R-56H	S½	H	** 5.11	Own F-50½H	B4IH	191	264	c	2I	29¾	5¾x2¼x5/32	T
164	D-2	½	450	113	125	4400	2290	6.00/16S	7.50/15S	Own HD213	6-3 5/16x4⅛	213	6.3	155	78-3400	4-2⅝x6 11/16	N	Own HDS	3	Own R1000	S½	H	3.72-4.18	Own F10	B4IH	191	264	c	2I	39	6x⅛x2¼	T
165	D-5	½	465	113	125	4400	2170	6.00/16S	7.50/15S	Wau FC132	4-3¼x4	132	6.0	89	33-2800	3-2¼x4½	N	Own HDS	3	Own R1000	S	H	** 5.11	Own F10	B4IH	191	264	c	2I	39	6x⅛x2¼	T
166	C-15	¾-1	545	136	136	6500	2746	7.00 16S	7.50/16S	Own HD2	6-3 5/16x4⅛	213	6.4	151	79-3400	4-2⅝x6 11/16	N	Own HDS	3	Own HDR-60	SF	H	** 4.87	Own HDF-51	B4IH	216	308	c	2I	52¼	6½x2½x11/64	T
167	D-15	¾-1	580	113	130	6650	2770	7.00/16S	6.50/16	Ow HD213A	6-3 5/16x4⅛	213	6.3	155	78-3400	4-2⅝x6 11/16	N	Own HDS	3	Own R1100	SF	H	4.87-5.28	Own F100	B4IH	216	308	c	2I	56	6½x2½x11/64	T
168	(9) C20	1	590	133	157	8300	3089	6.00/20S	6.50/20	Wau XAH	4-3⅝x4½	186	4.6	125	42-2400	3-2x6⅞	N	Own H4A	4	Own 708H	SF	H	5.28-6.16	Own 102H	B4IH	216	308	c	TX	52⅜	7x2¾x7/32	T
169	(9) C30	1½	610	133	172	11500	3210	30x5†S	6.50/20	Own HD-3	6-3 5/16x4⅛	213	6.4	151	79-3400	4-2⅝x6 11/16	N	Own H4A	4	Own H-725H	SF	H	5.28-6.60	Own H-103H	B4IH	291	412	c	TX	52⅜	7x2¾x7/32	T
170	CS30	1½	705	133	172	11600	3293	30x5†S	7.50/20	Own HD3	6-3 5/16x4⅛	213	6.4	151	79-3400	4-2⅝x6 11/16	N	Own H4A	4	Own 730H	SF	H	5.14-8.10	Own H-103H	B4IH	291	412	c	TX	52⅜	7x2¾x7/32	T
171	D-30	1½	650	128	173	12200	3510	30x5†S	7.50/20	Own HD232	6-3⅜x4⅛	232	6.0	170	81-3200	4-2⅝x6 11/16	N	Own H41	4	Own R1200	SF	H	**-6.16	Own F300	B4IH	291	412	c	TX	57	8x⅛x2½	T
172	DS-30	1½	765	128	173	12300	3610	30x5†S	7.50/20	Own HD232	6-3⅜x4⅛	232	6.0	170	81-3200	4-2⅝x6 11/16	N	Own H41	4	Own R2200	SF	H	5.14-7.15	Own F300	B4IH	291	412	c	TX	57	8x⅛x2½	T
173	C35	1½-2	795	136	175	12500	3594	30x5†S	7.50/20	Ow FAB223	6-3 5/16x4	223	5.4	160	78-3400	4-2⅝x5 11/16	N	Own H4A	4	Own H-735H	SF	H	5.62-7.40	Own H-108H	B4IH	291	412	c	TX	52⅜	7x2¾x7/32	T
174	CS35	1½-2	890	136	175	12500	3712	30x5†S	7.50/20	Ow FAB223	6-3 5/16x4	223	5.4	160	78-3400	4-2⅝x5 11/16	N	Own H4A	4	Own 730½H	SF	H	5.14-8.10	Own H-108H	B4IH	291	412	c	TX	52⅜	7x2¾x7/32	T
175	D-35	1½-2	970	137	179	13400	4120	6.50/20D	7.50/20	Ow FAB241	6-3⅜x4½	241	5.8	175	84-3200	4-2⅝x5 11/16	N	Own W42	4	Own R1300	SF	H	5.62-6.50	Own F301	B4IHV	291	412	c	PX	60	8 3/16x3/16x3	T
176	DS-35	1½-2	1085	137	179	13500	4220	6.50/20D	7.50/20	Ow FAB241	6-3⅜x4½	241	5.8	175	84-3200	4-2⅝x5 11/16	N	Own W42	4	Own R2300	SF	H	5.14-7.15	Own F301	B4IHV	291	412	c	PX	60	8 3/16x3/16x3	T

† Rear 32 x 6   ° Rear 7.00/17

† Rear 32 x 6. (1) Hudson-Terraplane—"Ready to run." Delivered at Factory Prices. Includes all Federal taxes but does not include any state and/or local taxes. ♦ Denotes New Models or Change in Specifications.

For abbreviations see page 269

Line Number	MAKE AND MODEL	GENERAL (See Keynote): Tonnage Rating	Chassis Price	Standard Wheelbase	Max. W. B. Furnished	Gross Vehicle Weight with Max. Tires	Chassis Wt. (Stripped)	TIRE SIZES (D-dual rear, S-single rear): Standard Front and Rear	Maximum Tire Size Furnished	ENGINE DETAILS: Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings: Number, Diameter and Length	Governor Standard	TRANSMISSION: Make and Model	Forward Spd's	REAR AXLE: Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	FRONT AXLE: Make and Model	BRAKES: SERVICE: Make Location Type Operat'n	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimensions (Std. W. B.)	FRAME: Side Rail Dimensions	Type
1	International . . C40	2-3	1145	145	185	14500	4362	6.50/20D	34x7	Ow FAB223	6-3 5/16x4	223	5.4	160	78-3400	4-2⅜x5 31/32	N	Own F5	5	Own H-755H	SF	H	5.62-7.40	Own H-108H	B4IH	339	478	c	TX	61⅜	8x3¼x7/32	T
2	(Con't.) CS40	2-3	1280	145	185	14500	4448	6.50/20D	34x7	Ow FAB223	6-3 5/16x4	223	5.4	160	78-3400	4-2⅜x5 31/32	N	Own F5	5	Own 731H	SF	H	5.14-8.10	Own H-108H	B4IH	339	478	c	TX	61⅜	8x3¼x7/32	T
3	. . . . D-40	2-3	1365	134	176	14700	4805	7.00/20D	34x7	Ow FAB259	6-3½x4½	259	5.7	192	89-3200	4-2⅜x5 31/32	N	Own F51A	5	Own R1400	SF	H	5.62-6.50	Own F400	B4IHV	339	478	c	PX	60	8¼x7/32x3	T
4	. . . . C50	3-4	1835	145	185	17000	5650	32x6D	36x8	Ow FBB279	6-3⅝x4½	279	4.7	191	83-2900	7-2 43/64x11 43/64	Y	Own H5	5	Own 905H	SF	H	6.14-7.2	Own 251H	B4IHV	376	532	c	TX	59¾	8x3¾x¼	T
5	. . . . D-50	3-4	1975	137	179	17200	6215	7.50/20D	36x8	Ow FBB298	6-3¾x4½	298	5.7	218	93-2800	7-2 43/64x11 43/64	Y	Own F51A	5	Own R1500	SF	H	6.43-7.16	Own F500	B4IHV	376	532	c	PX	60	8 15/16x7/32x3½	T
6	. . . . C55	3½-4½	2490	140	210	21500	6606	34x7D	10.50/20	Ow FBB298	6-3¾x4½	298	5.7	214	90-2800	7-2 43/64x11 43/64	Y	Own H5	5	Own 1006H	SF	H	6.43-7.16	Own 300H	B4IHV	477	678	c	TX	54¾	8⅛x3¾x3/16	T
7	. . . . D-60	3½-4½	2795	149	197	20400	7190	9.00/20D	10.50/20	Ow FBB361	6-4⅛x4½	360	5.2	268	111-2700	7-2 43/64x11 43/64	Y	Own F52	5	Own R1600	SF	H	**-6.43	Own F600	B4IHV	477	679	c	PX	72	9⅛x3/16x3½	T
8	. . . . C60	4-5	2615	140	210	21500	6685	34x7D	10.50/20	Ow FBB298	6-3¾x4½	298	5.7	214	90-2800	7-2 43/64x11 43/64	Y	Own H5	5	Own 1154H	2F	H	7.1-9.43	Own 300H	B4IHV	477	678	c	TX	54¾	8⅛x3¾x3/16	T
9	. . . . DR-60	4-5	2945	149	197	20400	7190	9.00/20D	10.50/20	Ow FBB361	6-4⅛x4½	360	5.2	268	111-2700	7-2 43/64x11 43/64	Y	Own F52	5	Own R1650	2F	H	**-7.10	Own F600	B4IHV	477	679	c	PX	72	9⅛x3/16x3½	T
10	. . . . DR-70	4-6	4195	149	197	24400	8100	36x8D	40x10	Ow FBB401	6-4⅛x5	400	5.2	308	114-2600	7-2 43/64x11 43/64	Y	Own F52	5	Own R1700	2F	H	**-8.05	Own F700	T4IA	617	923	G	PX	72	10x3/16x3½	T
11	. . . . A-8	7½	6200	160	225	38000	12035	9.75/20D	44x10	Own FEB	6-5x5½	648	4.4	460	140-2100	7-3¼x17¾	Y	Own H7	5	Own 1305	2F	H	4.95-6.37	Own 505	T4IA	620	923	G	TD	72	12⅛x⅜x3½	T
12	. . (e.u.s.) . D-300	1½-2	715	99	117	12000	3345	30x5S	7.50/20	Ow HD232A	6-3 5/16x4½	232	6.0	170	81-3200	4-2⅝x6 11/64	N	Own H4A	4	Own R1200	SF	H	**-6.16	Own F450	B4IH	291	412	c	TX	83	6½x3/16x2⅝	T
13	. . (e.u.s.) DS-300	1½-2	830	99	117	12100	3445	30x5S	7.50/20	Ow HD232A	6-3 5/16x4½	232	6.0	170	81-3200	4-2⅝x6 11/64	N	Own H4A	4	Own R2200	SF	H	5.14-7.15	Own F450	B4IH	291	412	c	TX	83½	6½x3/16x2⅝	T
♦ 14	Kenworth 88	. . . . . .	2067	146	200	15000	4400	32x6D	8.25/20	Her JXC	6-3¾x4¼	282	5.7	194	83-2500	7-2½x10 13/16	N	BL 2341	4	Tim 54411H	SF	H	5.8-6.8	Tim 31000H	L4IHV	388	578	a	TX	60	8x3x¼	C
♦ 15	 89	. . . . . .	2277	146	200	18000	4830	7.50/20D	9.00/20	Her JXC	6-3¾x4¼	282	5.7	194	83-2500	7-2½x10 13/16	N	BL 2341	4	Tim 56410H	SF	H	6.16-7.4	Tim 31000H	L4IHV	388	578	a	TX	60	8x3x¼	C
♦ 16	 127	. . . . . .	2800	154	202	19500	6500	8.25/20D	9.75/20	HerWXC2	6-4x4¼	360	4.5	212	90-2400	7-2⅝x13¼	N	BL 3341	4	Tim 56410H	SF	H	6.16-7.4	Tim 33000H	L4IHV	388	578	a	FD	72	8x3x¼	C
♦ 17	 90	. . . . . .	2419	146	200	19200	6380	7.50/20D	9.00/20	Her JXC	6-3¾x4¼	282	5.7	194	83-2500	7-2½x10 13/16	N	BL 2341	4	Tim 58206H	SF	H	6.8-7.8	Tim 31000H	L4IHV	436	660	a	TX	60	8x3x¼	C
♦ 18	 128	. . . . . .	3100	165	206	20700	6450	9.00/20D	9.75/20	Her WXC2	6-4⅛x4½	360	8.5	250	100-2400	7-2⅝x13¼	N	BL 3341	4	Tim 58206H	SF	H	6.8-7.8	Tim 33000H	L4IHV	455	660	. . .	FD	83	8x3x½	C
♦ 19	. . . . 146B	. . . . . .	3179	158	206	20700	6600	9.00/20D	9.75/20	Bud K393	6-4 1/16x4¾	393	4.9	260	103-2600	7-3x11½	N	BL 3341	4	Tim 58206H	SF	H	6.8-7.8	Tim 33000H	L4IHV	436	660	a	FD	72	8x3x½	C
20	 525	. . . . . .	(23)	168	204	26300	8400	9.00/20D	10.50/20	Bud LO525	6-4½x5½	525	5.5	385	135-2200	7-3x11½	Y	Fu 5A-620	5	Tim 75736	2F	H	6.85-8.64	Tim 35100	L4IHV	510	867	d	TD	84	7½x3¼x¼	C
21	 526	. . . . . .	(23)	168	204	32000	8700	9.75/20D	10.50/20	Bud LO525	6-4½x5½	525	5.5	385	135-2200	7-3x11½	Y	Fu 5A-620	5	Tim 76736	2F	H	6.42-8.50	Tim 35100	L4IHV	510	867	a	TD	84	7½x3¼x¼	C
22	. . . . 241A	. . . . . .	(23)	169	228	35000	9000	9.75/20D	10.50/20	HaS 160-1	6-4¼x5½	468	4.4	322	112-2200	4-2¼x10⅜	Y	BL 5341	4	Tim 76736	2F	H	6.02-8.5	Tim 36020N	Ws2IM	436	596	a	FD	84	8x3x½	C
♦ 23	. . . . (D) 505	. . . . . .	5928	168	204	20700	9640	9.00/20D	9.75/20	Cum HB4	4-4⅞x6	448	17.	287	83-1800	5-4½x11½	Y	BL 5341	4	Tim 58206H	SF	H	4.56-7.80	Tim 33000H	L4IH	384	660	a	TD	84	7½x3¼x¼	C
♦ 24	. . . . (D) 506	. . . . . .	6326	168	204	25300	9900	9.00/20D	10.50/20	Cum HB4	4-4⅞x6	448	17.	287	83-1800	5-4½x11½	Y	BL 5341	4	Tim 75736H	2F	H	6.85-9.41	Tim 33000H	L4IH	478	768	a	TD	84	7½x3¼x¼	C
♦ 25	. . . . (D) 507	. . . . . .	6745	168	204	32000	10850	9.75/20D	10.50/20	Cum HB4	4-4⅞x6	448	17.	287	83-1800	5-4½x11½	Y	BL 5341	4	Tim 76736H	2F	H	6.02-9.20	Tim 35100H	L4IH	510	867	a	TD	84	7½x3¼x¼	C
26	. . . . (D) 511	. . . . . .	(23)	187	205	28000	10700	9.00/22D	9.75/22	Cum HB6	6-4⅞x6	672	17.	427	125-1800	7-4½x16½	Y	BL 7341	4	Tim 59000	SF	R	6.04-9.55	Tim 36000	Ws2IA	400	596	a	TD	102	7½x3¼x¼	C
27	. . . . (D) 519	. . . . . .	(23)	190	225	26300	10200	9.00/20D	10.50/20	Cum HB6	6-4⅞x6	672	17.	427	125-1800	7-4½x16½	Y	BL 7341	4	Tim 75736	2F	H	6.85-9.41	Tim 35100	Ws2IA	356	542	a	TD	103	7½x3¼x¼	C
28	. . . . (D) 521	. . . . . .	(23)	190	225	35000	10000	9.00/20D	10.50/22	Cum HB6	6-4⅞x6	672	17.	427	125-1800	7-4½x16½	Y	BL 7341	4	Tim 76736	2F	H	6.02-9.20	Tim 36000	Ws2IA	400	596	a	TD	103	7½x3¼x¼	C
29	La France C3	2-2½	1915	177	207	13000	4900	7.00/20D	8.25/20	Wau 6BK	6-3¾x4¼	282	5.2	188	85-3200	7-2⅝x10¼	N	WG T9	4	Tim 53307H	SF	R	5.83-6.80	Tim 33000H	L4IH	328	616	a	TX	91	10x3¼x¼	L
30	Republic D4	2½-3	2065	177	207	15000	5150	7.00/20D	8.25/20	Wau 6BK	6-3¾x4¼	282	5.2	188	85-3200	7-2⅝x10¼	N	Fu MKU	4	Tim 54411H	SF	R	5.83-6.80	Tim 33000H	L4IHV	338	672	a	TX	91	10x3¼x¼	L
31	. . . . E4	3-4	2315	177	207	17000	5475	7.50/20D	9.00/20	Wau 6BK	6-3¾x4¼	282	5.2	188	85-3200	7-2⅝x10¼	N	Fu MLU	4	Tim 56410H	SF	R	5.71-7.40	Tim 33000H	L4IHV	338	754	a	TX	91	10x3¼x¼	L
32	. . . . F4	3½-4½	3070	177	207	22000	6525	7.50/20D	9.75/20	Wau 6MK	6-4⅛x4¾	381	6.1	252	85-2500	7-2⅝x12½	Y	Fu 5A430	5	Tim 58300H	SF	R	5.57-7.80	Tim 33000H	L4IHV	384	794	a	TX	91	10x3¼x¼	L
33	. . . . H6	4-5	3340	177	207	22000	7175	9.00/20D	9.75/20	Wau 6MK	6-4⅛x4¾	381	6.1	252	85-2500	7-2⅝x12½	Y	Fu 5A430	5	Wis 72000L	2F	R	5.61-8.40	Tim 33000H	L4IHV	384	756	a	TX	91	10x3¼x¼	L
34	. . . . K1	5-6	5300	195	225	26000	8235	9.75/20D	10.50/20	Wau 6SRL	6-4⅜x5⅛	462	4.6	302	102-2400	7-3x13⅞	Y	Fu MRU	4	Tim 75733H	2F	R	5.85-9.4	Tim 35100H	L4IHV	510	990	a	TX	107	9x3¼x¼	L
35	. . . . M4	6-7	5745	195	225	32000	8685	9.75/20D	10.50/24	Wau 6-125	6-4⅜x5⅛	462	5.0	328	125-2400	7-3x13⅞	Y	Fu MRU	4	Tim 76733H	2F	R	5.86-9.2	Tim 35100H	L4IHV	510	1030	a	TX	107	9x3¼x¼	L
36	Le Moon 208	2	1275	140	178	13200	3600	6.50/20S	32x6	Wau 6BL	6-3½x4¼	245	5.1	165	73-3000	7-2⅜x10¼	N	WG T9	4	Tim 53300H	SF	H	4.85-6.6	Tim 30000H	L4IH	275	545	C	TX	81	8x3½x¼	T
37	 308	2½-3½	1385	163	190	15000	4200	6.50/20D	8.25/20	Wau 6BM	6-3⅝x4¼	263	5.1	175	78-3000	7-2⅜x10¼	N	WG T9	4	Tim 54410H	SF	H	5.83-6.8	Tim 31000H	L4IHV	355	635	C	TX	81	8x3½x¼	T
38	 408	3-4	1900	163	190	17000	5000	7.50/20D	9.00/20	Wau 6BK	6-3¾x4¼	282	5.1	190	85-3200	7-2⅜x10¼	N	BL 2341	4	Tim 56200H	SF	H	7.4-6.16	Tim 32502H	L4IHV	328	755	C	TX	81	8x3½x¼	T
39	 507	4-5	2350	163	190	19500	6000	8.25/20D	9.75/20	Wau 6MK	6-4⅛x4¾	381	4.8	254	85-2400	7-2⅝x12½	N	Cla 270VO	5	Tim 58300H	SF	H	6.14-7.8	Tim 32502H	L4IHV	385	814	C	TD	81	9x4x¼	TF
40	 508	4-5	2500	163	190	19500	6000	8.25/20D	9.75/20	Wau 6-110	6-4x4¾	358	5.1	254	110-2800	7-2 11/16x12½	Y	Cla 270VO	5	Tim 58300H	SF	H	6.14-7.8	Tim 32502H	L4IHV	385	814	C	TD	81	9x4x¼	TF
41	 510	4-5	2700	163	190	19500	6000	8.25/20D	9.75/20	Wau 6-110	6-4x4¾	358	5.1	254	110-2800	7-2⅞x12½	Y	Cla 270VO	5	Tim 58300H	SF	H	6.14-7.8	Tim 32502H	L4IHV	385	814	c	TD	81	9x4x¼	TF
42	 607	5-6	3250	163	190	24000	7000	9.00/20D	9.75/20	Wau 6SRL	6-4⅜x5⅛	462	5.1	300	102-2400	7-3x13⅞	Y	BL 5351	4	Tim 65725H	WF	H	6.0-7.75	Tim 35000H	L4IHV	462	825	C	TD	81	9x4x¼	TF
43	. . . . (c.o.e.) 1100	Tractor	6500	86	137	. . . . . .	9300	9.75/20D	10.50/20	Wau 6RB	6-5x5¾	677	4.6	460	127-2000	4-3½x11¾	Y	BL 7341	4	Tim 66725W	WF	H	9.0-10.2	Ti 26050TW	Ws4IA	876	1050	C	TD	60	9x4x¼	TF
44	. . . . . (c.o.e.) 218	2½	1400	111	Op	15000	3500	6.50/20D	8.25/20	Wau 6BL	6-3½x4¼	245	5.1	165	73-3000	7-2⅜x10¼	N	Cla 185	4	Tim 53300H	SF	H	4.85-6.6	Tim 32502H	L4IH	264	635	a	TX	92	8x3½x¼	T
45	. . . . . (c.o.e.) 318	3	1525	111	Op	16800	4200	6.50/20D	34x7	Wau 6BM	6-3⅝x4¼	263	5.1	175	78-3000	7-2⅜x10¼	N	Cla 185	4	Tim 54412H	SF	H	5.83-6.8	Tim 32502H	L4IHV	328	635	a	TX	92	8x3½x¼	T
46	. . . . . (c.o.e.) 418	3½	2200	111	Op	19200	5000	7.50/20D	9.00/20	Wau 6BK	6-3¾x4¼	282	5.1	190	85-3200	7-2⅜x10¼	N	Cla 200VO	5	Tim 56410H	SF	H	6.16-7.4	Tim 32502H	L4IHV	338	755	a	TX	92	8x3½x¼	T
47	. . . . . (c.o.e.) 518	4	2625	111	Op	24000	6000	8.25/20D	9.75/20	Wau 6MK	6-4⅛x4¾	381	4.8	254	85-2400	7-2⅝x12½	N	Cla 270VO	5	Tim 58300H	SF	H	6.14-7.8	Tim 35000H	L4IHV	384	815	a	TX	92	9x4x¼	TF
48	Mack, Jr. (11)2M4A	. . . . . .	635	114	120	4500	2880	6.00/16S	6.50/16	Own MR140	4-3 5/16x4⅜	140	5.4	98	45-2800	3-2¼x4 11/16	N	WG 84C	3	Own MR45	S½	H	4.55-4.90	Own MR2	L4IH	198	242	C	TX	38¾	5⅞x2¼x9/64	C
49	. . . . . . (11)2M6A	. . . . . .	675	114	120	4500	2975	6.00/16S	6.50/16	Own MR209	6-3 5/16x4⅜	209	5.4	144	72-3000	4-2¼x5 13/16	N	WG 84C	3	Own MR45	SF	H	4.55-4.90	Own MR2	L4IH	198	242	C	TX	38¾	5⅞x2¼x9/64	C
50	. . . . . (11)2M6AS	. . . . . .	750	114	120	5000	3180	6.50/16S	7.00/16	Own MR209	6-3 5/16x4⅜	209	5.4	144	72-3000	4-2¼x5 13/16	N	WG 86	3	Own MR5	SF	H	**5.10	Own MR2	L4IH	213	327	C	TX	38¾	5⅞x2¼x9/64	C
51	. . . . 10M1	. . . . . .	875	108	139	8000	3060	6.00/20‡S	7.50/20	Own MR209	6-3 5/16x4⅜	209	5.4	132	48-3200	4-2¼x5 13/16	N	OwnMR1B	4	Own MR8	SF	H	5.28-6.6	Own MR10	L4IH	289	366	C	TX	55	7 1/16x2⅜x7/32	C
52	. . . . 11M	. . . . . .	745	139	190	11000	3205	6.00/20†S	7.50/20	Own MR209	6-3 5/16x4⅜	209	5.4	144	72-3000	4-2¼x5 13/16	N	OwnMR1B	4	Own MR11	SF	H	5.28-6.6	Own MR11	L4IH	289	366	C	TX	57½	7 1/16x2⅜x7/32	C
53	. . . . 21M	. . . . . .	915	139	190	12000	3600	6.00/20D	7.50/20	Own MR228	6-3⅜x4¼	228	5.4	150	74-3000	7-2⅝x10 11/16	N	OwnMR1D	4	Own MR12	SF	H	5.28-6.6	Own MR21	L4IH	289	366	C	TX	57½	7 1/16x2⅜x7/32	C
54	. . . . . (12) 21MT	. . . . . .	1425	105	190	13000	4000	6.00/20D	8.25/20	Own MR228	6-3⅜x4¼	228	5.4	150	74-3000	7-2⅝x10 11/16	N	Own MR1D	4	Own MR13	SF	H	5.28-6.6	Own MR21	L4IHV	289	366	c	TX	61	7⅛x3x¼	C
55	. . . . 31M	. . . . . .	1225	142	190	14500	4200	6.50/20D	8.25/20	Own MR268	6-3⅜x5	268	5.2	175	85-3000	7-2⅝x10 11/16	N	OwnMR2B	4	Own MR145	SF	H	5.28-6.6	Own MR31	L4IHV	349	523	C	TX	60½	7⅛x3x¼	C
56	. . . . 31MDR	. . . . . .	1345	142	190	14500	4370	6.50/20D	8.25/20	Own MR268	6-3⅜x5	268	5.2	175	85-3000	7-2⅝x10 11/16	N	OwnMR2B	4	Ow MRdr145	2F	H	6.62-8.21	Own MR31	L4IHV	349	523	C	TX	60½	7⅛x3x¼	C
57	. . . . . (12) 31MT	. . . . . .	1675	105	190	15000	4200	6.50/20D	8.25/20	Own MR268	6-3⅜x5	268	5.2	175	85-3000	7-2⅝x10 11/16	N	Own MR2B	4	Own MR15	SF	H	5.28-6.6	Own MR31	L4IHV	349	523	c	TX	61	7⅛x3x¼	C
♦ 58	Mack . . (a) . . . . . EE	. . . . . .	985	133	175	12000	4650	6.00/20S	7.50/20	Own FO	6-3½x4⅜	253	5.7	160	75-2800	7-2⅝x12	N	WG	4	Tim	SF	H	5.14-5.66	Tim	L4IH	296	478	a	TX	60	7 15/16x3x7/32	T
♦ 59	. . . . EF	. . . . . .	1195	133	192	14000	4900	6.00/20D	8.25/20	Own FM	6-3⅝x4⅜	271	5.7	178	78-2800	7-2⅝x12	N	WG	4	Tim	SF	H	4.85-6.80	Tim	L4IHV	325	528	a	TX	60	7 15/16x3x7/32	T
60	. . . . EJ	. . . . . .	1625	158	194	16000	5350	6.50/20D	8.25/20	Own EJ	6-3½x5	288	5.5	190	84-2800	7-2⅝x10 11/16	N	Fu	5	Tim	SF	H	4.86-6.80	Tim	L4IHV	329	650	a	TX	84	8x3¼x¼	T
61	. . . . EH	. . . . . .	2095	158	194	18000	6000	7.00/20D	9.00/20	Own BG	6-3⅝x5	310	5.4	202	90-3000	7-2⅝x10 11/16	Y	Fu	5	Tim	SF	H	4.44-7.40	Tim	L4IHV	370	686	a	TX	84	8½x3¼x¼	T
62	. . . . ER	. . . . . .	2950	146	194	. . . . . .	7350	8.25/20D	9.75/20	Own BG	6-3⅜x5	310	5.4	202	90-3000	7-2⅝x10 11/16	Y	Fu	5	Own AB	CD	R	7.7-13.1	Tim	O4IMV	441	735	a	TX	72	8½x3¼x¼	T
63	. . . . EM	. . . . . .	2950	158	194	20000	7350	7.50/20D	9.75/20	Own BG	6-3⅜x5	310	5.4	202	90-3000	7-2⅝x10 11/16	Y	Own BF	5	Own EM	SF	H	5.43-6.33	Own EM	O4IMV	468	750	a	TX	84	9⅛x3¼x¼	T
64	. . . . BF	. . . . . .	4200	144	210	. . . . . .	8100	8.25/20D	9.75/22	Own CU	6-3⅞x5	354	4.9	237	100-2800	7-2⅝x10 11/16	Y	Own BF	5	Own AB	CD	R	9.3-13.0	Own BF	O4IMV	563	920	a	TX	72½	8½x3¼x¼	T
65	. . . . EQ	. . . . . .	3450	158	194	23000	7650	8.25/20D	9.75/20	Own CU	6-3⅞x5	354	4.9	237	100-2800	7-2⅝x10 11/16	Y	Own BF	5	Own FD	2F	H	6.31-8.64	Own EQ	O4IMV	468	750	a	TX	84	9⅛x3¼x5/16	T
66	. . . . BM	. . . . . .	4250	175	211	. . . . . .	9175	9.00/20D	10.50/20	Own CE	6-4x5½	415	5.0	270	108-2400	7-3x12 3/16	Y	Own CF	5	Own FD	2F	H	6.31-8.64	Own BM	O4IMV	562	920	a	TX	102½	9½x3x¼	T
67	. . . . BX	. . . . . .	5250	189	225	. . . . . .	10925	9.75/22D	11.25/24	Own CF	6-4⅛x5½	468	5.0	310	118-2400	7-3x12 3/16	Y	Own CF	5	Own FE	2F	H	6.46-9.05	Own BX	O4IMV	690	976	a	TX	120	9½x3x¼	T
68	. . . . BX	. . . . . .	6250	189	225	. . . . . .	11200	9.75/22D	11.25/24	Own CF	6-4⅛x5½	468	5.0	310	118-2400	7-3x12 3/16	Y	Own CF	5	Own BX	CD	R	6.0-9.67	Own BX	O4IMV	649	976	a	TX	120	9½x3x¼	T
69	. . . . FH	. . . . . .	8000	160	172	. . . . . .	13200	10.50/24D	12.00/24	Own CF	6-4⅛x5½	468	5.0	310	118-2400	7-3x12 3/16	Y	Own BX	4	Own FH	CD	R	7.48-12.4	Own BQ	O4IA	781	1194	a	J	91	10⅛x3½x5/16	T
70	. . . . BQ	. . . . . .	7600	194	230	. . . . . .	12500	10.50/24D	11.25/24	Own BQ	6-4⅝x5¾	611	4.8	390	125-2200	4-3½x10 5/16	Y	Own AK	4	Own BQ	2F	H	7.43-10.0	Own BQ	O4IMV	781	1194	a	FX	120	10⅛x3⅛x¼	T
71	. . . . AK	. . . . . .	7600	186	240	. . . . . .	12700	10.50/24D	11.25/24	Own BQ	6-4⅝x5¾	611	4.8	390	125-2200	4-3½x10 5/16	Y	Own AK	4	Own BQ	2F	H	7.43-10.0	Own AK	O4IA	781	1194	a	FX	102	8⅝x3x5/16	T
72	. . . . AC	. . . . . .	6150	192	228	. . . . . .	13425	36x6†D	13.50/24	Own AC	4-5x6	471	3.9	300	74-1600	3-3x10½	Y	Own AC	4	Own AC	CD	R	8.95-11.5	Own AK	O4IMV	781	1194	a	T	120	8⅝x3x5/16	T
73	. . . . AC	. . . . . .	8250	186	240	. . . . . .	14200	10.50/24D	13.50/24	Own BQ	6-4⅝x5¾	611	4.8	390	125-2200	4-3½x10 5/16	Y	Own AC	4	Own AC	CD	R	8.95-11.5	Own AK	O4IA	781	1194	a	T	102	8⅝x3x5/16	T
74	. . . . AP	. . . . . .	9000	191	216	. . . . . .	14500	36x7‡D	13.50/24	Own AP	6-5x6	707	4.8	427	138-1900	4-3½x11 9/16	Y	Own AC	4	Own AC	CD	R	8.95-11.5	Own AK	O4IA	781	1194	a	T	102	8⅝x3x5/16	T
75	(12) (e.b.s.) EC	. . . . . .	3600	117	171	20000	7200	7.50/20D	9.00/20	Own BG	6-3⅜x5	310	5.4	202	90-3000	7-2⅝x10 11/16	Y	Own BF	5	Own EM	SF	H	5.43-6.33	Own EC	O4IMV	468	704	a	TX	93	8½x3x¼	T
76	(12) (e.b.s.) EB	. . . . . .	4250	117	171	23000	7900	8.25/20D	9.75/20	Own CU	6-3⅞x5	354	5.9	237	100-2800	7-2⅝x10 11/16	Y	Own BF	5	Own FD	2F	H	6.31-8.64	Own EB	O4IMV	468	709	a	TX	93	8½x3x¼	T
77	(12) (e.b.s.) CH	. . . . . .	5150	135	189	. . . . . .	10225	9.00/20D	10.25/20	Own CE	6-4x5½	415	5.0	270	108-2400	7-3x12 3/16	Y	Own CF	5	Own FD	2F	H	6.31-8.64	Own CH	O4IMV	562	920	a	TX	111	9½x3x¼	T
78	(12) (e.b.s.) CJ	. . . . . .	6100	135	189	. . . . . .	10750	9.75/22D	11.25/24	Own CF	6-4⅛x5½	468	5.0	310	118-2400	7-3x12 3/16	Y	Own CF	5	Own FE	2F	H	6.46-9.00	Own CJ	O4IMV	690	976	a	TX	111	10⅝x3¼x5/16	T
79	Moreland . . . R-170	3-4	1947	168	180	17000	4841	7.50/20D	8.25/20	Her JXCM	6-3¾x4¼	282	5.3	197	85-2900	7-2½x10 13/16	N	BL 2341	4	Tim 54411H	SF	H	** 5.83	Tim 32501H	L4IH	373	578	a	TD	90½	8x3¼x¼	T
80	. . . . (D) R-1801	3-4	3380	168	180	18000	5641	8.25/20D	9.00/20	Her DJXC	6-3¾x4¼	298	14.	208	83-2600	7-3x10 3/16	N	BL 2441	4	Tim 56411H	SF	H	** 6.17	Tim 32501H	L4IH	419	659	a	TD	90½	8x3¼x¼	T
81	. . . . R-190	4-5	2325	180	180	19000	5241	8.25/20D	9.00/20	Her JXDM	6-4x4¼	320	5.6	224	95-2900	7-2½x10 13/16	N	Fu 5B330	4	Tim 56411H	SF	H	** 6.17	Tim 32501H	L4IH	419	659	a	TD	102⅛	8x3¼x¼	T
82	. . . . . . (13) E-220	6	3425	180	208	22000	6514	9.00/20D	9.75/20	Her WXC3	6-4¼x4½	383	5.0	265	106-2800	7-2⅝x13¼	N	Fu 5A430	5	Tim 58300H	SF	H	** 6.14	Tim 35000H	L4IH	419	659	a	CD	100⅛	9 3/16x3x5/16	T
83	. . . . . . (13) E-260	7	3760	180	208	26000	6914	9.00/20D	9.75/20	Her WXC3	6-4¼x4½	383	5.0	265	106-2800	7-2⅝x13¼	N	Fu 5A430	5	Tim 75733H	2F	H	** 7.37	Tim 35100H	L4IH	568	867	a	CD	100⅝	9 3/16x3x5/16	T

† Rear 32 x 6. ‡ Rear 6.50/20

84	.....(13a)H-340	8	4915	196	208	34000	8614	9.75/20D	9.75/20	Her RXB	6-4½x5¼	501	4.7	330	110-2200	7-3x13¼	N	BL 5241	4	Ti 76733TW	2F	R	** 7.89	Ti 26450TW	T41A	568	867	a	CD	115	9 1/16x3 3/16x 5/32	T
85	....(13b)HC-340	8	5215	196	...	34000	.....	9.75/20D	9.75/20	Her RXB	6-4½x5¼	501	4.7	330	110-2200	7-3x13¼	N	BL 5241	4	T&M T18000	CF	R	** 7.99	Ti 26450TW	T41A	568	867	a	CD	115	9 1/16x3 3/16x 5/32	T
86	....(13c)TC-420	10	7020	208	...	42000	.....	9.75/20D	9.75/20	Her HXB	6-5x6	707	4.5	460	148-2000	7-3½x16⅝	N	BL 7341	4	T&M T18000	CF	R	** 7.99	Ti 27450TW	T41A	568	867	a	CD	116½	11x3 5/16x5/16	T
87	Netco............A	2-4	1800	157	190	15000	5500	7.50/20D	7.50/20	Wau BL	6-3½x4¼	245	5.0	165	73-3200	7-2⅝x10¼	Y	BL 224	4	Tim 54200H	SF	H	5.83-6.83	Tim 30020H	L4IHV	306	575	c	TD	Opt	6x3x¼	C
88	............B	3-6	2400	160	200	20000	6500	8.25/20D	9.00/20	Wau BK	6-3¾x4¼	282	5.0	180	84-3200	7-2⅝x10¼	Y	BL 3341	4	Tim 56300H	SF	H	6.83-5.71	Tim 31000H	L4IHV	355	575	c	TD	Opt	6x3x¼	C
89	C	4-7	2800	160	200	22000	7300	9.00/20D	9.75/20	Wau MK	6-4⅛x4¾	381	4.8	240	85-2500	7-2⅝x12½	Y	BL 334	4	Tim 58200H	SF	H	6.83-7.75	Tim 33000H	L4IHV	398	650	c	TD	Opt	7x3½x¼	C
90	............E	5-8	3400	157	212	24000	8100	9.75/20D	9.75/20	Wau MZ	6-4¼x4¾	404	6.0	274	90-2400	7-2⅝x12½	Y	BL 334	4	Tim 65720H	WF	R	7.75-8.25	Tim 33000H	L4IHV	484	490	c	TD	Opt	7x3½x¼	C
91	............J	6-9	4600	157	212	30000	9200	10.50/20D	10.50/20	Lyc AEF	8-3¾x4¾	420	5.2	300	120-2800	5-2¾x12¾	Y	BL 534	4	Tim 76730	2F	R	8.50-9.25	Tim 35000H	Ws4IA	663	750	c	CD	Opt	9x3½x¼	C
92	............K	7-10	4900	168	212	32000	9900	10.50/24D	10.50/24	Wau SRK	6-4⅝x5⅛	517	4.6	335	110-2300	7-3x13⅞	Y	BL 724	4	Tim 78720	2F	R	9.92-10.3	Tim 27450	Ws4IA	757	760	c	CD	Opt	9x3½x¼	C
93	Plymouth (*) PT57	Com'l	560	116	116	4000	1850	6.00/16S	6.00/16S	Own	6-3⅛x4⅜	201	6.7	145	70-3000	4-2¼x5 11/16	N	Own	3	Own	Hy½	H	3.73-4.78	Own	O4IH	148	251	C	TX	37 11/16	6x2x⅛	C
94	Reo (2)..(14) 4-50	½	637	114	120	.....	1973	6.00/16S	6.50/16	Own	4-3 5/16x4⅜	140	5.4	98	42-2800	3-2¼x4 11/16	N	WG T84C	3	Spi	S½	H	4.55-4.90	Own	L4IH	198	242	C	TX	38¾	5 21/32x2¼x5/64	T
95	.......(14) 6-50	½	663	114	120	.....	2063	6.00/16S	6.50/16	Own	6-3 5/16x4⅜	209	5.4	145	70-2800	4-2¼x5 11/16	N	WG T86	3	Spi	S½	H	4.55-4.90	Own	L4IH	198	242	C	TX	38¾	5 21/32x2¼x5/64	T
96	.......(14) 4-75	¾	705	114	120	.....	2081	6.50/16S	7.50/16	Own	4-3 5/16x4⅜	140	5.4	98	42-2800	3-2¼x4 11/16	N	WG T84C	3	Spi	SF	H	**5.10	Spi	L4IH	213	327	C	TX	38¾	5 21/32x2¼x5/64	T
97	.......(14) 6-75	¾	730	114	120	.....	2171	6.50/16S	7.50/16	Own	6-3 5/16x4⅜	209	5.4	145	70-2800	4-2¼x5 11/16	N	WG T86	3	Spi	SF	H	*#5.10	Spi	L4IH	213	327	C	TX	38¾	5 21/32x2¼x5/64	T
98	........1A4-1C4	1-1½	700	139	166	.....	2930	6.00/20†S	7.00/20	Own	6-3 5/16x4⅜	209	5.4	145	70-2800	4-2¼x5 11/16	N	Own	4	Own	SF	H	5.28-6.33	Own	L4IH	246	366	C	TX	57½	7 1/16x2⅜x7/32	T
99	.....1A4H-1C4H	1-1½	745	139	166	.....	3315	6.00/20†S	7.00/20	Own	6-3⅜x4¼	228	5.4	150	73-3000	7-2⅝x10 11/16	N	Own	4	Own	SF	H	5.28-6.33	Owp	L4IH	246	366	C	TX	57½	7 1/16x2⅜x7/32	T
100	........1B4-1D4	1½-2½	793	139	190	.....	3405	6.00/20†S	7.50/20	Own	6-3⅜x4¼	228	5.4	150	73-3000	7-2⅝x10 11/16	N	Own	4	Own	SF	H	5.28-6.33	Own	L4IH	289	438	a	TX	57½	7 1/16x2⅜x7/32	T
101	....(14a) 1B7M	1½-2½	1190	105	166	.....	3630	6.00/20†S	7.50/20	Own	6-3⅜x4¼	228	5.4	150	73-3000	7-2⅝x10 11/16	N	Own	4	Own	SF	H	5.28-6.33	Own	L4IHV	289	438	a	TX	60½	7⅛x3x¼	T
102	....1B4H-1D4H	1½-2½	883	139	190	.....	3425	6.00/20†S	7.50/20	Own	6-3⅜x5	268	5.5	160	81-2800	7-2⅝x10 11/16	N	Own	4	Own	SF	H	5.28-6.33	Own	L4IH	289	438	a	TX	57½	7 1/16x2⅜x7/32	T
103	.......2B4-2D4	2-3	1099	142	190	.....	3800	6.50/20D	8.25/20	Own	6-3⅜x5	268	5.5	178	83-2800	7-2⅝x10 11/16	N	Own	4	Own	SF	H	5.28-6.33	Own	L4IH	349	523	a	TX	60½	7 1/16x3x7/32	T
104	........2H5-2J5	2-4	1368	142	190	.....	4260	6.50/20D	8.25/20	Own	6-3⅜x5	268	5.5	178	83-2800	7-2⅝x10 11/16	N	Cla	5	Own	2F	H	6.62-8.21	Own	L4IH	396	593	a	TX	60½	7 1/16x3x7/32	TL
105	....(14a) 2B7M	2-4	1492	105	166	.....	4095	6.50/20D	8.25/20	Own	6-3⅜x5	268	5.5	178	83-2800	7-2⅝x10 11/16	N	Own	5	Own	2SF	H	5.28-6.33	Own	L4IHV	349	523	a	TX	60½	7⅛x3x¼	TL
106	...3H5(3J5-3K5)	3-5	1981	153	205	.....	6280	7.50/20D	9.75/20	Own	6-3⅝x5	309	5.4	204	87-2800	7-2⅝x10 11/16	Y	Own	4	Own	SF	H	6.14-7.17	Own	L4IHV	407	660	c	FD	67¾	8 5/16x3x¼	TB
107	...3HR5(3JR5-3KR5)	3½-5	2338	153	205	.....	6470	7.50 20D	9.75/20	Own	6-3⅝x5	309	5.4	204	87-2800	7-2⅝x10 11/16	Y	Cla	5	Own	2F	H	** -8.5	Own	L4IHV	407	660	c	FD	67¾	8 5/16x3x¼	TB
108	...4H5(4J5-4K5)	4-6	3133	156	205	.....	7270	8.25/20D	10.50/20	Buda	6-4⅜x4¾	428	4.7	284	104-2600	7-3x11½	Y	BL	5	Own	2F	H	** -8.5	Own	L4IHV	407	660	c	FD	67⅞	10x3x¼	TB
109	.........4WH5	4-6	3495	156	205	.....	7650	8.25/20D	10.50/20	Buda	6-4⅜x4¾	428	4.7	284	104-2600	7-3x11½	Y	BL	5	Own	2F	H	** -8.5	Own	Ws4IA	407	660	c	FD	67⅞	10x3x¼	TB
110	Schacht.........8A	1-1½	1185	124	167	.....	4100	6.00/20S	7.50/20	Her JXB	6-3⅝x4¼	263	5.4	164	68-2800	7-2½x10 11/16	N	WG T9	4	Tim	SF	H	6.6-5.14	Tim	L4IH	315	380	G	TX	Opt	8x3x7/32	C
111	............10A	2	1285	130	172	.....	4350	6.50/20D	7.50/20	Her JXB	6-3⅝x4¼	263	5.4	164	68-2800	7-2½x10 11/16	N	WG T9	4	Tim	SF	H	6.6-5.14	Tim	L4IHV	315	380	G	TX	Opt	8x3x7/32	C
112	............12A	2-3	1565	132	174	.....	4675	7.50/20D	8.25/20	Her JXB	6-3⅝x4¼	263	5.4	164	68-2800	7-2½x10 11/16	Y	Own	4	Tim	SF	H	5.88-6.8	Tim	L4IHV	341	527	G	TX	Opt	8x3x7/32	C
113	............15A	2½-3½	1795	137	179	.....	5075	7.50/20D	8.25/20	Her JXC	6-3¾x4¼	282	5.3	176	73-2800	7-2½x10 11/16	Y	Fu 5A33	5	Tim	SF	H	5.88-6.8	Tim	L4IHV	341	527	G	TX	Opt	8x3x7/32	C
114	.......(15) 18A	2½-4	1945	137	179	.....	5200	7.50/20D	8.25/20	Her JXD	6-4x4¼	320	5.3	204	84-2400	7-2½x10 11/16	Y	Fu 5A330	5	Tim	SF	R	5.88-6.8	Tim	L4IHV	341	527	G	TX	Opt	8x3x7/32	C
115	............20A	3-5	2295	138	180	.....	5600	8.25/20D	9.00/20	Her JXD	6-4x4¼	320	5.3	204	84-2400	7-2½x10 11/16	Y	Fu 5A330	5	Tim	SF	R	4.44-7.4	Tim	L4IHV	371	578	G	TX	Opt	8x3x¼	C
116	............25A	3½-5½	2845	142	182	.....	5790	8.25/20D	9.00/20	Her WXC2	6-4⅛x4½	360	4.7	238	100-2800	7-2⅝x13½	Y	Fu 5A430	5	Tim	SF	R	5.7-7.4	Tim	L4IHV	371	578	G	TD	Opt	8x3x¼	C
117	............28A	4-5	3165	142	182	.....	6600	9.00/20D	9.75/20	Her WXC3	6-4¼x4½	383	4.4	265	106-2800	7-2⅝x13¼	Y	Fu 5A430	5	Tim	SF	R	6.14-7.8	Tim	L4IHV	435	758	G	TD	Opt	8x3x¼	C
118	...(e.b.s.) 115CU	2½-3½	1985	91	152	.....	5575	7.50/20D	8.25/20	Her JXC	6-3¾x4¼	282	5.3	176	73-2800	7-2½x10 11/16	Y	Fu 5A33	5	Tim	SF	H	5.88-6.8	Tim	L4IHV	341	527	G	TX	Opt	8x3x¼	C
119	..(e.b.s.) 120CU	3-5	2575	92	152	.....	6100	8.25/20D	9.00/20	Her JXD	6-4x4¼	320	5.3	204	84-2800	7-2½x10 11/16	Y	Fu 5A33	5	Tim	SF	R	4.44-7.4	Tim	L4IHV	371	578	G	TX	Opt	8x3x¼	C
120	..(e.b.s.) 125CU	3½-5½	2985	96	152	.....	6290	8.25/20D	9.00/20	Her WXC2	6-4⅛x4½	360	4.7	238	100-2800	7-2⅝x13½	Y	Fu 5A430	5	Tim	SF	R	5.7-7.4	Tim	L4IHV	371	578	G	TD	Opt	8x3x¼	P
121	..(e.b.s.) 128CU	4-5½	3350	96	152	.....	7100	9.00/20D	9.75/20	Her WXC3	6-4¼x4½	383	4.4	265	106-2800	7-2⅝x13¼	Y	Fu 5A430	5	Tim	SF	R	6.14-7.8	Tim	L4IHV	435	758	G	TD	Opt	8⅛x3x3/16	C
122	.......(15) 35A	5-7	3595	142	184	.....	7260	9.75/20D	9.75/20	Her WXC3	6-4¼x4½	383	4.4	265	106-2800	7-2⅝x13¼	Y	Fu 5A430	5	Own	2F	R	7.14-8.93	Tim	L4IHV	508	768	H	TD	Opt	8⅛x3x3/16	P
123	.......(15) 40A	6-8	4350	144	193	.....	7580	9.75/20D	10.50/20	Her YXC3	6-4⅝x4¾	478	4.4	318	103-2200	7-3x15	Y	Fu 5A62	5	Wis	2F	R	7.33-9.43	Tim	L4IHV	508	780	H	TD	Opt	8⅛x3x3/16	P
124	.......(15) 66A	8-11	5495	144	193	.....	9675	10.50/20D	10.50/24	Her RXC	6-4⅝x5¼	529	4.4	355	115-2200	7-3x15	Y	Fu 5A620	5	Wis	2F	R	7.33-10.2	Tim	Ws4IA	636	847	H	TD	Opt	8⅛x3x3/16	P
125	............75A	11	7500	...	...	.....	11650	40x10D	11.25/24	Her HXB	6-5x6	707	4.5	455	148-2000	7-3½x16⅝	Y	Fu MHU	12	Wis	2F	R	8.04-11.13	Tim	Ws4IA	582	868	A	TD	Opt	10⅛x3x3/16	C
126	.........(T) TRA	12-15	4395	142	168	.....	6890	9.00/20D	9.75/20	Her YXC3	6-4⅝x4¾	478	4.4	318	103-2200	7-3x15	Y	Fu 5A62	5	Own	2F	R	7.14-8.93	Shu	L4IHV	508	768	H	TD	Opt	8x3x¼	C
127	(e.b.s.)(T)TRCU	12-15	4580	105	124	.....	7225	9.00/20D	9.75/20	Her YXC3	6-4⅝x4¾	478	4.4	318	103-2200	7-3x15	Y	Fu 5A620	5	Wis	2F	R	7.33-9.43	Tim	L4IHV	508	780	H	TD	Opt	8x3x¼	C
128	Ster-...FB50 De L	2-2½	1915	177	207	13000	4900	7.00/20D	8.25/20	Wau 6BK	6-3¾x4¼	282	5.2	188	85-3200	7-2⅝x10¼	N	WG T9	4	Tim 53307H	SF	R	5.83-6.80	Tim 33000H	L4IH	328	616	a	TX	91	10x3¼x¼	L
129	ling..FB60 De L	2½-3	2065	177	207	15000	5150	7.00/20D	8.25/20	Wau 6BK	6-3¾x4¼	282	5.2	188	85-3200	7-2⅝x10¼	N	Own UC12	4	Tim 54411H	SF	R	5.83-6.80	Tim 33000H	L4IHV	338	672	a	TX	91	10x3¼x¼	L
130	...FB70 De L	3-4	2315	177	207	17000	5475	7.50/20D	9.00/20	Wau 6BK	6-3¾x4¼	282	5.2	188	85-3200	7-2⅝x10¼	N	Own UC6	4	Tim 56410H	SF	R	5.71-7.40	Tim 33000H	L4IHV	338	754	a	TX	91	10x3¼x¼	L
131	...........FD70	3-4	2384	177	207	17000	5540	7.50/20D	9.00/20	Wau 6BK	6-3¾x4¼	282	5.2	188	85-3200	7-2⅝x10¼	N	Own UC6	4	Tim 76410H	SF	R	7.35-8.21	Tim 33000H	L4IHV	338	754	a	TX	91	10x3¼x¼	L
132	...........FB80	3½-4½	3070	177	207	22000	6525	8.25/20D	9.75/20	Wau 6MK	6-4⅛x4¾	381	6.1	252	85-2500	7-2⅝x12½	Y	Own UC25	4	Tim 58300H	SF	R	5.57-7.80	Tim 33000H	L4IHV	384	794	a	TX	91	10x3¼x¼	L
133	...........FD90	4-5	3340	177	207	22000	7175	9.00/20D	9.75/20	Wau 6MK	6-4⅛x4¾	381	6.1	252	85-2500	7-2⅝x12½	Y	Own UC25	5	Wis 72000L	2F	R	5.61-8.40	Tim 33000H	L4IHV	384	756	a	TX	91	10x3¼x¼	L
134	...........FC90	4-5	3250	177	207	22000	6775	8.25/20D	9.75/20	Wau 6BK	6-3¾x4¼	282	5.2	188	85-3200	7-2⅝x10¼	N	BL2252	5	Own TU90H	CD	R	7.74-10.8	Tim 33000H	L4IHV	384	1138	s	TX	91	10x3¼x¼	L
135	...........FD95	4½-5½	3840	177	207	26000	7850	9.75/20D	10.50/22	Wau 6MZ	6-4¼x4¾	404	5.7	267	89-2400	7-2⅝x12½	Y	BL5351	5	Tim 75733H	2F	R	6.85-9.41	Tim 35000H	L4IHV	478	892	a	TX	91	10x3¼x¼	L
136	...........FC95	4½-5½	4035	177	207	26000	7775	9.75/20D	10.50/22	Wau 6MZ	6-4¼x4¾	404	5.7	267	89-2400	7-2⅝x12½	Y	BL5351	5	Own TU95H	CD	R	7.74-10.8	Tim 35000H	L4IHV	478	1138	s	TX	91	10x3¼x¼	L
137	....(16) FD97	5-6	5300	195	225	26000	8235	9.75/20D	10.50/24	Wau 6SRL	6-4⅝x5⅛	462	4.6	302	102-2400	7-3x13⅞	Y	Own UC2	4	Tim 75733H	2F	R	6.85-9.41	Tim 35100H	L4IHV	510	990	a	TX	107	9x3¾x¼	L
138	....(16) FC100	5-6	5245	195	225	26000	7835	9.75/20D	10.50/24	Wau 6SRL	6-4⅝x5⅛	462	4.6	302	102-2400	7-3x13⅞	Y	Own UC2	4	Own IB100M	CD	R	6.11-10.8	Tim 35000N	O2IMV	576	724	a	TX	107	9x3¾x¼	L
139	....(16) FD115	6-7	5745	195	225	32000	8685	9.75/20D	10.50/24	Wau 6-125	6-4⅝x5⅛	462	5.0	328	125-2400	7-3x13⅞	Y	Own UC2	4	Tim 76733H	2F	R	6.86-9.20	Tim 35100H	L4IHV	510	1030	s	TX	107	9x3¾x¼	L
140	....(16) FC135	6-7	5580	195	225	34000	8835	9.75/22D	10.50/24	Wau 6-125	6-4⅝x5⅛	462	5.0	328	125-2400	7-3x13⅞	Y	Own UC2	4	Own IB140M	CD	R	6.11-10.8	Tim 26450N	O2IMV	528	746	s	TX	107	9x3¾x¼	L
141	....(16) FD140	7-8	6860	195	225	36000	9850	10.50/20D	11.25/24	Wau 6SRK	6-4⅝x5⅛	517	4.5	331	110-2300	7-3x13⅞	Y	Own UC2	4	Wis 1910W	2F	R	7.16-10.0	Tim 26450TW	Ws4IA	574	970	a	TX	107	9x3¾x¼	L
142	....(16) HC140	7-8	5715	189	219	36000	9485	9.75/22D	10.50/24	Wau 6-125	6-4⅝x5⅛	462	5.0	328	125-2400	7-3x13⅞	Y	Own UC2	4	Own IB140M	CD	R	7.40-10.8	Tim 26452N	O2IMV	646	746	s	TX	107	9¼x3¼x⅜	L
♦143	....(16) HC185	10-14	8930	182	228	45000	11785	10.50/24S	13.50/24	Wau 6RB	6-5x5¾	677	5.3	470	145-2000	4-3½x11⅝	Y	Own UC9	4	Ow NS185W	CD	R	7.31-12.4	Ti 27452-TW	Ws4IA	708	1176	s	JX	92⅝	9¼x3¼x⅜	L
♦144	....(16) HC200	12-15	9895	182	228	50000	14985	10.50/24S	13.50/24	Wau 6RB	6-5x5¾	677	5.3	470	145-2000	4-3½x11⅝	Y	Own UC9	4	Ow SS200-W	CD	R	9.26-12.4	Ti 27452-TW	Ws4IA	708	1176	s	TX	92⅝	9¼x3¼x⅜	L
♦145	....(16) HC250	15-18	11495	177	177	60000	16985	11.25/24S	13.50/24	Wau 6RB	6-5x5¾	677	5.3	470	145-2000	4-3½x11⅝	Y	BL 7341	4	Ow WS250-W	CD	R	9.26-12.4	Ti 27451-TW	Ws4IA	708	1176	s	JX	92⅝	12x3½x⅜	L
♦146	Stewart......40HC	¾	595	113	121	.....	2190	6.00/16S	7.50/16	Con	4-3 1/16x4⅜	162	5.7	120	50-2800	3-2¼x4 11/16	N	WG	4	Spl	SF	H	5.1-4.27	Spl	L4IH	216	320	C	T	44	6x2¼x5/32	T
♦147	............60H	¾	645	128	128	.....	2325	6.00/16S	7.50/16	Con	6 3x4	170	6.2	124	60-2800	4-2¼x5 11/16	N	WG	4	Spl	SF	H	5.1-4.27	Spl	L4IH	216	320	C	T	52	6 1/16x2¼x1/16	T
♦148	............61A	1-1½	680	132	163	.....	3000	6.00/16S	7.00/20	Con	6-3¼x4⅜	218	5.9	155	65-2800	4-2¼x5 11/16	N	WG	4	Cla	SF	H	5.1-1.0	Cla	L4IH	220	352	a	T	63	8½x2¾x7/32	T
149	............45A	1½-2	745	134	188	.....	3490	6.00/20S	7.50/20	Wau	6-3⅜x4⅛	222	5.6	155	65-2800	4-2⅜x5⅝	N	WG	4	Cla	SF	H	5.5-6.8	Cla	L4IH	256	472	a	T	54	8½x2¾x¼	T
150	............45AS	1½-2½	945	144	188	.....	3590	6.00/20D	7.50/20	Wau	6-3⅜x4⅛	222	5.6	155	65-2800	4-2⅜x5⅝	N	WG	4	Eat	SF	H	5.83-8.11	Cla	L4IH	285	522	a	T	64	8½x2¾x¼	T
151	............47A	2-3	1045	134	205	.....	4340	6.50/20D	8.25/20	Wau	6-3⅝x4¼	263	5.6	175	77-2800	7-2⅝x10¼	N	WG	4	Cla	SF	H	6.37-6.88	Cla	L4IHV	285	512	a	T	54	8½x2¾x¼	T
152	............50A	2½-3½	1245	134	205	.....	4490	6.50/20D	8.25/20	Wau	6-3⅝x4¼	263	5.6	175	77-2800	7-2⅝x10¼	N	WG	4	Cla	SF	H	6.37-6.88	Cla	L4IHV	365	610	a	T	54	8½x2¾x¼	T
153																																
154	............50AS	2½-3½	1395	144	205	.....	4590	7.00/20D	8.25/20	Wau	6-3⅝x4¼	263	5.6	175	77-2800	7-2⅝x10¼	N	WG	4	Eat	SF	H	5.83-8.11	Cla	L4IHV	365	650	a	T	64	8½x2¾x¼	T
155	............50AD	....	1441	134	205	.....	4640	6.50/20D	8.25/20	Wau	6-3⅝x4¼	263	5.6	175	77-2800	7-2⅝x10¼	N	WG	4	Cla-Eat	2F	H	** -8.5	Cla	L4IHV	....	....	A	T	54	8½x2¾x¼	T
156	............49A	3-4	1795	144	220	.....	5640	7.00/20D	9.00/20	Wau	6-3¾x4¼	282	5.5	190	83-2800	7-2⅝x10¼	N	Fu	5	Cla	SF	R	7.16-6.4	Cla	L4IHV	408	742	a	T	64	10x2¾x¼	T
157	............49AD	....	1914	144	220	.....	5675	7.00/20D	9.00/20	Wau	6-3¾x4¼	282	5.2	190	83-2800	7-2⅝x10¼	N	Fu	5	Cla-Eat	2F	R	** -8.5	Cla	L4IHV	408	742	A	T	64	10x2¾x¼	T
158	............51A	3-4	1995	144	220	.....	5840	7.00/20D	9.00/20	Con	6-4⅛x4½	361	5.4	225	85-2800	7-2⅝x14⅜	N	Fu	5	Cla	SF	R	7.16-6.4	Cla	L4IHV	408	742	a	T	64	10x2¾x¼	T
159	............51AD	....	2114	144	220	.....	5875	7.00/20D	9.00/20	Con	6-4⅛x4½	361	5.4	225	85-2800	7-2⅝x14⅜	N	Fu	5	Cla-Eat	2F	R	** -8.5	Cla	L4IHV	408	742	A	T	64	10x2¾x¼	T
160	............58A	3½-4½	2590	164	224	.....	6790	7.50/20D	10.50/20	Wau	6-4¼x4¾	404	5.7	265	88-2500	7-2⅝x12½	Y	Fu	5	Cla	SF	R	7.16-6.4	Cla	B4IMV	478	810	E	T	88 13/16	10x2¾x¼	T
161	............58AD	....	2680	164	224	.....	6825	7.50/20D	10.50/20	Wau	6-4¼x4¾	404	5.7	265	88-2500	7-2⅝x12½	Y	Fu	5	Cla-Eat	2F	R	** -8.5	Cla	B4IMV	478	810	E	T	88 13/16	10x2¾x¼	T
162	............59A	3½-4½	2990	164	224	.....	7290	7.50/20D	10.50/20	Wau	6-4¼x4¾	404	5.7	265	88-2500	7-2⅝x12½	Y	Fu	5	Tim	WF	R	7.25-8.5	Cla	B4IMV	550	898	E	T	88 13/16	10x2¾x¼	T
163	............59AD	....	3067	164	224	.....	7225	7.50/20D	10.50/20	Wau	6-4¼x4¾	404	5.7	265	88-2500	7-2⅝x12½	Y	Fu	5	Tim	2F	R	7.37-8.5	Cla	B4IMV	550	898	E	T	88 13/16	10x2¾x¼	T
164	38-6	3½-5	4190	170	241	.....	8070	9.00/20D	10.50/22	Wau	6-4⅝x5⅛	517	4.5	330	110-2200	7-3x13⅞	Y	BL	5	Tim	WF	R	7.25-8.5	Eat	B4IMV	583	934	E	T	75⅝	9 1/16x2¾x5/32	T
165	............31X	5-8	5590	165	235	.....	9490	9.75/20D	10.50/24	Wau	6-4⅝x5⅛	517	4.5	330	110-2200	7-3x13⅞	Y	BL	12	Tim	WF	R	8.2-9.0	Eat	Ws41A	614	1004	E	T	73 1/16	9⅛x2¾x1/16	T
166	Studebaker.(1)*K5	½	773	116	...	4500	2500	6.00/16D	6.50/16	Own T	6-3 5/16x4⅜	226	6.0	173	90-3400	4 2½x5 11/32	N	WG T88	3	Spl 41-1	Hy	H	4.55-4.82	Own J5	L4IH	158	276	C	2I	35 3/16	6¼x1¾x5/64	T
♦167	........(1)*K10	1	695	130	...	6750	2840	6.50/16S‡	32x6	Own T	6-3 5/16x4⅜	226	6.0	152	79-3200	4-2½x5 11/32	N	Cla 140T	3	Cla R650	SF	H	4.63-5.14	Cla F182	L4IH	188	320	F	2I	52	6x2 3/32x3/16	T
168	........(1)*K15	1½-2	785	138	162	12000	3405	6.00/20†S	9.75/20S	Own 1T	6-3 5/16x4⅜	226	6.0	170	85-3200	4-2½x5 11/32	N	WG T9	4	Cla R750	SF	H	5.1 -6.8	Cla F266	L4IH	271	372	F	T	60	7x2¾x7/32	T
169	(1)*(c.o.e.)K15M	1½-2	785	101	162	12000	3140	6.00/20†S	9.75/20S	Own 1T	6-3 5/16x4⅜	226	6.0	170	85-3200	4-2½x5 11/32	N	WG T9	4	Cla R750	SF	H	5.1 -6.8	Cla F280	L4IH	271	372	F	T	59⅝	7x2¾x7/32	T
♦170	........(1)*K20	2-3	1105	138	180	14500	4315	6.50/20D	8.25/20§§	Her JXB	6-3⅝x4¼	263	5.8	179	80-2800	7-2½x10 11/16	Y	WG T9	4	Tim 54414	SF	H	4.8 -6.8	Tim 31020N	L4IH	320	477	N	T	60	8½x3x7/32	T
♦171	......(1)*K20D	2-3	2620	138	180	15500	5420	6.50/20D	8.25/20	Her DJXB	6-3½x4½	260	14	174	68-2600	7-3x10 1/32	Y	Cla 200V	5	Tim 94420	2F	H	5.57-7.62	Tim 31020N	L4IH	320	477	N	T	60	8½x3x7/32	T
♦172	(1)*(c.o.e.)K20M	2-3	1105	101	162	14500	4040	6.50/20D	8.25/20§§	Her JXB	6-3⅝x4¼	263	5.8	179	80-2800	7-2½x10 11/16	Y	WG T9	4	Tim 54414	SF	H	4.8 -6.8	Tim 31100N	L4IH	320	477	N	T	59⅝	8½x3x7/32	T
♦173	........(1)*K25	2½-4	1680	138	180	17000	5050	7.00/20D	9.00/20	Her JXD	6-4x4¼	320	5.6	219	86-2600	7-2½x10 11/16	Y	Cla 200V	5	Tim 56411	SF	H	6.1 -7.4	Tim 31020N	L4IH	418	644	N	2I	60	8½x3x7/32	T
♦174	(1)*(c.o.e.)K25M	2½-4	1680	101	162	17000	4765	7.00/20D	9.00/20	Her JXD	6-4x4¼	320	5.6	219	86-2600	7-2½x10 11/16	Y	Cla 200V	5	Tim 56411	SF	H	6.1 -7.4	Tim 31100N	L4IH	418	644	N	2I	59⅝	8½x3x7/32	T
♦175	........(1)*K30	3-5	2085	142	184	20000	5800	7.00/20†D	9.75/20	Her WXC3	6-4¼x4½	383	5.5	268	106-2800	7-2⅝x13¼	Y	Cla 270V	5	Tim 58300	SF	H	6.1 -7.8	Tim 32507	L4IH	421	659	N	T	60	8 5/16x3x5/32	T
♦176	(1)*(c.o.e.)K30M	3-5	2085	101	166	20000	5610	7.00/20†D	9.75/20	Her WXC3	6-4¼x4½	383	5.5	268	106-2800	7-2⅝x13¼	Y	Cla 270V	5	Tim 58300	SF	H	6.1 -7.8	Tim 32507	L4IH	421	659	N	T	59⅝	8 5/16x3x5/32	T

† Rear 32 x 6. §§ Rear 10.50/20. (*) Plymouth & Studebaker—Chassis & Cab prices. (1) Studebaker—Delivered at Factory Prices. Includes all Federal taxes but does not include any state and/or local taxes. (2) Rec.—Retail list price at Factory exclusive of Michigan sales tax. ♦Denotes New Models or Change in Specifications.

For abbreviations see page 269

Line Number	MAKE AND MODEL	GENERAL (See Keynote)						TIRE SIZES (D-dual rear S-single rear)		ENGINE DETAILS								TRANS-MISSION		REAR AXLE				FRONT AXLE	BRAKES						FRAME	
		Tonnage Rating	Chassis Price	Standard Wheelbase	Max. W. B. Furnished	Gross Vehicle Weight with Max. Tires	Chassis Wt. (Stripped)	Standard Front and Rear	Maximum Tire Size Furnished	Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings Number, Diameter and Length	Governor Standard	Make and Model	Forward Spd's	Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	Make and Model	SERVICE Make Location Type Operat'n	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimension (Std. W. B.)	Side Rail Dimensions	Type
♦ 1	Ward..........125	3-4	3654	187	200	21000	7200	9.00/20D	9.75/20	Wau MZ	6-4¼x4¾	404	5.7	254	85-2500	7-2⅝x12½	Y	Fu 5A430	5	Tim 58205H	SF	R	5.25-7.80	Tim 33000H	L4IHV	384	694	a	TD	108½	12x3¼	B
♦ 2	LaFrance(D)127D	3-4	5655	187	215	21000	7500	9.00/20D	9.75/20	Bud 415	6-4x5½	415	12	308	105-2200	7-3x11½	Y	Fu 5A430	5	Tim 58205H	SF	R	5.25-7.80	Tim 33000H	L4IHV	384	694	a	TD	108½	12x3¼	T
♦ 3	131	5	4460	204	215	26000	7300	9.75/20D	10.50/20	Wau MZ	6-4¼x4¾	404	5.7	254	85-2500	7-2⅝x12½	Y	Fu 5A430	5	Wis 1337BH	2F	R	5.6-9.4	Shu 15682B	L4IHV	488	792	a	CD	125	12x3¼	T
4	136	5-6	4961	204	215	26000	8700	9.75/20D	10.50/20	Wau SRL	6-4⅜x5⅛	462	4.6	300	102-2200	7-3x13½	Y	Fu 5A620	5	Wis 1337BH	2F	R	5.6-9.4	Shu 15682B	L4IHV	488	792	a	CD	125	12x3¼	T
5	..........137D	5-6	6681	204	215	26000	9000	9.75/20D	10.50/20	Bud 468	6-4¼x5½	468	13	346	118-2200	7-3x11½	Y	Fu 5A620	5	Wis 1337BH	2F	R	5.6-9.4	Shu 15682B	L4IHV	488	792	a	CD	125	12x3¼	T
6	..........138D	5-6	7414	204	215	26000	9000	9.75/20D	10.50/20	Her DRXB	6-4⅜x5¼	474	14	350	120-2000	7-3½x3¼	Y	Fu 5A620	5	Wis 1337BH	2F	R	5.6-9.4	Shu 15682B	L4IHV	488	792	a	CD	125	12x3¼	T
7	156	7½	6250	218	230	32000	10000	10.50/20D	10.50/24	Wau 6-125	6-4⅜x5⅛	462	5.0	324	125-2600	7-3x13⅞	Y	Fu 5A620	5	Wis 1747KW	2F	R	6.0-9.2	Shu 15693WB	Ws4IA	547	867	a	CD	139	12x3¼	T
8	..........335RWS	7½	5450	205	224	26000	9360	9.75/24D	10.50/20	Wau SRL	6-4⅜x5⅛	462	4.6	300	102-2400	7-3x13⅞	Y	Fu 5A620	4	Tim 65720W	WF	R	5.2-9.25	Tim35100TW	Ws4IA	617	867	a	TD	115¾	14x3x¼	B
9	..........55RH	7½	5350	218	230	32000	10500	10.50/20D	10.50/24	Wau SRK	6-4⅝x5⅛	517	4.6	330	110-2300	7-3x13⅞	Y	Fu MRU	4	Tim 76733	2F	R	6.0-9.2	Tim 26452	L4IHV	560	867	a	CD	139	12x3¼	T
10	..........156D	7½	8159	218	230	32000	10500	10.50/20D	10.50/24	Her DRXB	6-4⅜x5¼	474	14	350	120-2000	7-3½x3¼	Y	Fu 5A602	5	Wis 1747KW	2F	R	6.0-9.2	Shu15693WB	Ws4IA	547	867	a	CD	139	12x3¼	T
11	..........50D	7½-10	5975	159	173	36000	11000	40x8D	40x8	Wau SRL	6-4⅜x5⅛	462	4.6	300	102-2400	7-3x13⅞	Y	BL 7241	4	Tim 68702D	WF	R	8.75-11.6	Tim 16302	T2IMV	470	517	a	TD	88	14x3¼x¼	T
12	..........176D	15	8269	218	230	32000	11000	10.50/20D	10.50/24	Cu. Die. HB	6-4⅞x6	672	17	420	125-1800	7-3¾x16½	Y	Cla 710	5	Wis 1747KW	2F	R	6.0-9.2	Shu 15693W	Ws4IA	547	867	a	CD	139	12x3¼	T
13	..........201D	20	8591	218	230	38000	12000	10.50/20D	11.25/24	Cu. Die. HB	6-4⅞x6	672	17	420	125-1800	7-3¾x16½	Y	Cla 710	5	Wis 1910KW	2F	R	6.0-9.2	Shu15693WB	Ws4IA	547	867	a	CD	139	12x3¼	T
14	......(c.o.e.) H	3-4	4436	132	Op	21000	8000	9.00/20D	9.75/20	Wau MZ	6-4¼x4¾	404	5.7	254	85-2500	7-2⅜x12½	Y	Fu 5A380	5	Tim 58205H	SF	R	5.25-7.80	Shu 672B1	L4IHV	497	786	a	CD	106	12x3¼	T
15	......(c.o.e.) J	5	5138	132	Op	26000	8500	9.75/20D	10.50/20	Wau MZ	6-4¼x4¾	404	5.7	254	85-2500	7-2⅜x12½	Y	Fu 5A380	5	Wis 1337BH	2F	R	5.6-9.4	Shu 672B1	L4IHV	376	817	a	CD	106	12x3¼	T
16	......(c.o.e.) K	5-6	5925	146	Op	28000	9200	9.75/20D	10.50/20	Wau SRL	6-4⅜x5⅛	462	4.6	300	102-3200	7-3x13½	Y	Fu 5A620	5	Wis 1337BH	2F	R	5.6-9.4	Shu 672B1	L4IHV	376	817	a	CD	122	12x3¼	T
17	......(c.o.e.) L	7½	6984	146	Op	32000	10500	10.50/20D	10.50/24	Wau SRK	6-4⅝x5⅛	517	4.6	330	110-2300	7-3x13⅞	Y	Fu 5A620	5	Wis 1747KW	2F	R	6.0-9.2	Shu 673B12	Ws4IA	547	867	a	CD	122	12x3¼	T
♦ 18	......(c.o.e.) LD	15	9144	146	Op	32000	11500	10.50/20D	10.50/24	Cu. Die. HB	6-4⅞x6	672	17	420	125-1800	7-3¾x16½	Y	Cla 710	5	Wis 1747KW	2F	R	6.0-9.2	Shu 673B12	Ws4IA	547	867	a	CD	122	12x3¼	T
♦ 19	......(c.o.e.) MD	20	9399	146	Op	40000	12500	10.50/20D	11.25/24	Cu. Die. HB	6-4⅞x6	672	17	420	125-1800	7-3¾x16½	Y	Cla 710	5	Wis 1910W	2F	R	6.0-9.2	Shu 673B12	Ws4IA	547	867	a	CD	122	12x3¼	T
20	White........700P	¾	(23)	136	...	.....	3350	6.50/20S	7.50/20	Own 250	6-3 7/16x4½	250	5.8	175	68-2600	7-2⅞x10.7	Y	Own 45B	4	Own 36C	SF	H	4.85-6.80	Own 32D	L4IH	296	477	a	TX	60¼	7 15/16x3x7/32	T
♦ 21	700	1-2	1095	136	196	.....	4148	6.50/20S	7.50/20	Own 250	6-3 7/16x4½	250	5.8	175	68-2600	7-2⅞x10.7	Y	Own 45B	4	Own 36C	SF	H	4.85-6.80	Own 32D	L4IH	296	477	a	TX	60¼	7 15/16x3x7/32	T
♦ 22	..........700A	1½-3	1190	136	196	.....	4520	6.50/20D	7.50/20	Own 250	6-3 7/16x4½	250	5.8	175	68-2600	7-2⅞x10.7	Y	Own 45B	4	Own 36C	SF	H	4.85-6.80	Own 32D	L4IH	296	477	a	TX	60¼	7 15/16x3x7/32	T
♦ 23	..........700H	1½-4	1390	136	196	.....	4610	7.00/20D	7.50/20	Own 250	6-3 7/16x4½	250	5.8	175	68-2600	7-2⅞x10.7	Y	Own 45B	4	Own 46C	SF	H	4.86-6.80	Own 32D	L4IHV	296	478	a	TX	60¼	7 15/16x3x7/32	T
♦ 24	703	1-2	1450	136	178	.....	4450	7.00/20S	8.25/20	Own 270	6-3 9/16x4½	270	5.5	195	83-2800	7-2⅞x10.7	Y	Own 28B	4	Own 25C	SF	H	5.10-6.86	Own 22D	L4IHV	308	460	a	TX	60¼	7x2 25/32x7/32	T
♦ 25	704	1½-4	1550	136	226	.....	4740	7.00/20D	8.25/20	Own 270	6-3 9/16x4½	270	5.5	195	83-2800	7-2⅞x10.7	Y	Own 28B	4	Own 25C	SF	H	5.10-6.86	Own 22D	L4IHV	308	460	a	TX	60¼	7x2 25/32x7/32	T
♦ 26	..........704K	(*)	2050	136	160	.....	5520	7.00/20D	9.00/20	Own 303	6-3 25/32x4½	303	5.5	215	92-2800	7-2⅞x10.7	Y	Own 54B	4	Own 33C	SF	H	5.22-7.14	Own 22D	L4IHV	465	696	a	TX	60¼	7x2 25/32x7/32	T
♦ 27	..........704A	2-5	1670	136	226	.....	4855	7.50/20D	8.25/20	Own 270	6-3 9/16x4½	270	5.5	195	83-2800	7-2⅞x10.7	Y	Own 28B	4	Own 25C	SF	H	5.10-6.86	Own 22D	L4IHV	308	460	a	TX	60¼	7x2 25/32x7/32	T
♦ 28	709	1½-4	2150	136	226	.....	5543	7.50/20D	9.00/20	Own 303	6-3 25/32x4½	303	5.5	215	92-2800	7-2⅞x10.7	Y	Own 54B	5	Own 33C	SF	H	5.22-7.14	Own 22D	L4IHV	465	696	a	TX	60¼	7 1/16x3x¼	T
♦ 29	..........709A	3-6	2315	136	226	.....	5657	8.25/20D	9.00/20	Own 303	6-3 25/32x4½	303	5.5	215	92-2800	7-2⅞x10.7	Y	Own 54B	5	Own 33C	SF	H	5.22-7.14	Own 22D	L4IHV	465	696	a	TX	60¼	7 1/16x3x¼	T
♦ 30	710	2-4½	2450	136	226	.....	5959	7.50/20D	9.00/20	Own 318	6-3⅞x4½	318	5.5	234	94-2600	7-2⅞x10.7	Y	Own 54B	5	Own 33C	SF	H	5.22-7.14	Own 19D	L4IHV	525	824	a	TX	60¼	7 1/16x3x¼	P
♦ 31	..........710A	3-6½	2615	136	226	.....	6075	8.25/20D	9.75/20	Own 318	6-3⅞x4½	318	5.5	234	94-2600	7-2⅞x10.7	Y	Own 54B	5	Own 33C	SF	H	5.22-7.14	Own 19D	L4IHV	525	824	d	TX	60¼	7 1/16x3x¼	P
♦ 32	712	3-5	2750	130	226	.....	6500	8.25/20D	9.75/20	Own 318	6-3⅞x4½	318	5.5	234	94-2600	7-2⅞x10 11/16	Y	Own 54B	5	Own 33C	SF	H	5.22-7.14	Own 19D	L4IHV	525	824	a	TX	60	8x3x¼	T
♦ 33	..........712A	4-7	2915	130	226	.....	6600	9.00/20D	9.75/22	Own 318	6-3⅞x4½	318	5.5	234	94-2600	7-2⅞x10 11/16	Y	Own 54B	5	Own 33C	SF	H	5.22-7.14	Own 19D	L4IHV	525	824	a	TX	60	8x3x¼	T
♦ 34	718	3-6	3175	130	226	.....	6830	9.00/20D	9.75/22	Own 318	6-3⅞x4½	318	5.5	234	94-2600	7-2⅞x10 11/16	Y	Own 54B	5	Own 26C	2F	R	7.23-8.73	Own 16D	L4IHV	492	772	a	TX	60	8x3x¼	TL
♦ 35	..........718A	4½-8	3395	130	226	.....	7300	9.75/20D	10.50/20	Own 318	6-3⅞x4½	318	5.5	234	94-2600	7-2⅞x10 11/16	Y	Own 54B	5	Own 26C	2F	R	7.23-8.95	Own 16D	L4IHV	492	772	a	TX	60	8x3x¼	TL
♦ 36	640	....	6200	180	214	.....	10185	9.00/20D	9.75/20	Own 580	6-4⅝x5¾	580	4.6	385	130-2300	7-3x15 11/32	Y	Own 10B	5	Own 10C	SF	R	5.22-6.29	Own 6D	O4IA	553	832	a	CI	92½	8⅛x3 3/16x3/16	T
♦ 37	..........640K	....	6400	180	214	.....	10365	9.00/20D	10.50/20	Own 580	6-4⅝x5¾	580	4.6	385	130-2300	7-3x15 11/32	Y	Own 10B	5	Own 10C	SF	R	5.22-6.29	Own 9D	O4IA	591	832	a	CI	107	8⅛x3 3/16x3/16	T
♦ 38	.....(c.o.e.) 730	....	6100	108	180	.....	10940	9.75/20D	9.75/24	Own 505	12-3 25/32x3¾	505	6.2	343	143-2800	7-2⅞x13¾	Y	Own 26B	4	Own 24C	SF	R	5.22-7.14	Own 20D	O4IA	632	933	a	TD	138	8x3½x¼	C
♦ 39	720	5-9	4500	134	212	.....	8200	9.00/20D	10.50/22	Own 434	6-4 3/16x5¼	434	5.0	295	116-2400	7-2¾x13⅛	Y	Own 36B	5	Own 43C	2F	R	7.23-8.73	Own 24D	L4IHV	560	875	a	TD	60	8⅛x3 1/16x3/16	TF
♦ 40	..........720T	....	4500	134	158	.....	8100	9.00/20D	10.50/22	Own 460	6-4 5/16x5¼	460	5.0	320	123-2400	7-2¾x13⅛	Y	Own 36B	5	Own 43C	2F	R	7.23-8.73	Own 24D	L4IHV	560	875	a	TD	60	8x3x¼	T
♦ 41	..........722X	10	6825	212	212	.....	11000	10.50/24D	10.50/24	Own 529	6-4⅝x5¼	529	5.0	365	130-2400	7-2¾x13⅛	Y	Own 36BE	4	Own 45C	2F	R	6.67-9.50	Own 9D	O4IA	633	1050	a	TX	138	8¼x3⅛x⅜	P
♦ 42	641	....	6550	157	214	.....	10460	9.75/20D	10.50/20	Own 580	6-4⅝x5¾	580	4.6	385	130-2300	7-3x15 11/32	Y	Own 10B	5	Own 2C	2F	R	5.76-10.0	Own 9D	O4IA	633	996	a	CI	91¾	8⅛x3 3/16x3/16	T
♦ 43	.....(18)..641K	....	6750	157	214	.....	10800	9.75/20D	10.50/24	Own 580	6-4⅝x5¾	580	4.6	385	130-2300	7-3x15 11/32	Y	Own 10B	5	Own 2C	2F	R	5.76-10.0	Own 9D	O4IA	633	996	a	CI	107	8⅛x3 3/16x3/16	T
♦ 44	.....(c.o.e.) 731	....	6900	108	180	.....	11360	10.50/20D	11.25/22	Own 505	12-3 25/32x3¾	505	6.2	343	143-2800	7-2⅞x13¾	Y	Own 24BA	5	Own 45C	2F	R	6.67-9.50	Own 20D	O4IA	632	1050	a	TD	138	8x3½x¼	C
♦ 45	722	8-10	5500	134	212	.....	9300	9.75/20D	11.25/22	Own 529	6-4⅝x5¼	529	5.0	365	130-2400	7-2¾x13⅛	Y	Own 36B	5	Own 45C	2F	R	6.67-9.50	Own 6D	O4IA	632	1050	a	TD	60	8¼x3⅛x⅜	TF
♦ 46	642	....	6850	157	214	.....	11335	9.75/24D	10.50/24	Own 580	6-4⅝x5¾	580	4.6	385	130-2300	7-3x15 11/32	Y	Own 10B	5	Own 13C	2F	R	6.72-11.6	Own 9D	O4IA	623	1044	a	CI	91¾	8⅛x3 3/16x3/16	C
♦ 47	643	....	7050	157	214	.....	11665	10.50/24D	11.25/24	Own 580	6-4⅝x5¾	580	4.6	385	130-2300	7-3x15 11/32	Y	Own 10B	5	Own 13C	2F	R	6.72-11.6	Own 9D	O4IA	623	1044	a	CI	91¾	8⅛x3 3/16x3/16	C
♦ 48	691	....	7350	129	129	.....	12200	10.50/24D	11.25/24	Own 580	6-4⅝x5¾	580	4.6	385	130-2300	7-3x15 11/32	Y	Own 10BB	5	Own 13CB	2F	R	6.72-11.6	Own 13D	O4IA	623	1044	a	TD	65	8¼x3¾x⅝	C
♦ 49	..........632X	10	6700	215	Op	.....	11000	10.50/24D	9.75/20	Own 434	6-4 3/16x5¼	434	5.0	295	116-2400	7-2¾x13⅛	Y	Own 4B	4	Own 13C	2F	R	6.72-11.6	Own 9D	O4IA	623	1044	a	CI	100	8¼x3 1/16x⅝	C
♦ 50	..........720A	5-9½	4720	134	212	.....	8600	9.75/20D	10.50/22	Own 434	6-4 3/16x5¼	434	5.0	295	116-2400	7-2¾x13⅛	Y	Own 36B	5	Own 43C	2F	R	7.23-8.73	Own 24D	L4IHV	560	875	A	TD	60	8⅛x3 1/16x3/16	TF
♦ 51	..........722A	8-10	5840	134	212	.....	9800	10.50/20D	11.25/22	Own 529	6-4⅝x5¼	529	5.0	365	130-2400	7-2¾x13⅛	Y	Own 36B	5	Own 45C	2F	R	6.67-9.50	Own 9D	O4IA	632	1050	A	TD	60	8¼x3⅛x⅜	TF
♦ 52	.....(c.o.e.) 805	1½-3	1850	97	193	.....	4895	7.00/20D	9.00/20	Own 270	6-3 9/16x4½	270	5.5	195	83-2800	7-2⅞x10.7	Y	Own 44B	4	Own 37C	SF	H	5.14-6.83	Own 29D	L4IHV	368	587	a	TX	60	7x2 25/32x7/32	C
♦ 53	.....(c.o.e.) 809	1½-3	2350	97	193	.....	5643	7.50/20D	9.00/20	Own 303	6-3 25/32x4½	303	5.5	215	92-2800	7-2⅞x10.7	Y	Own 54B	5	Own 33C	SF	H	5.22-7.14	Own 23D	L4IHV	525	824	a	TX	60	7 1/16x3x¼	C
♦ 54	......c.o.e.) 810	2-4½	2650	97	193	.....	6010	7.50/20D	9.75/20	Own 318	6-3⅞x4½	318	5.5	234	94-2600	7-2⅞x10.7	Y	Own 54B	5	Own 33C	SF	H	5.22-7.14	Own 23D	L4IHV	525	824	a	TX	60	7 1/16x3x¼	C
♦ 55	.....(c.o.e.) 812	3-5	2950	97	193	.....	6600	8.25/20D	9.75/20	Own 318	6-3⅞x4½	318	5.5	234	94-2600	7-2⅞x10.7	Y	Own 54B	5	Own 33C	SF	H	5.22-7.14	Own 30D	L4IHV	525	824	a	TX	60	8x3x¼	C
♦ 56	.....(c.o.e.) 818	3-6	3375	97	193	.....	7120	9.00/20D	9.75/22	Own 318	6-3⅞x4½	318	5.5	234	94-2600	7-2⅞x10.7	Y	Own 54B	5	Own 26C	2F	R	7.23-8.73	Own 28D	L4IHV	491	772	a	TX	60	8x3x¼	P
♦ 57	....(c.o.e.) 805A	2-6	1970	97	193	.....	4970	7.50/20D	9.00/20	Own 270	6-3 9/16x4½	270	5.5	195	83-2800	7-2⅞x10.7	Y	Own 44B	4	Own 37C	SF	H	5.14-6.83	Own 29D	L4IHV	368	587	a	TX	60	7x2 25/32x7/32	C
♦ 58	....(c.o.e.) 809A	3-6½	2515	97	193	.....	5720	8.25/20D	9.00/20	Own 303	6-3 25/32x4½	303	5.5	215	92-2800	7-2⅞x10.7	Y	Own 54B	5	Own 33C	SF	H	5.22-7.14	Own 23D	L4IHV	525	824	a	TX	60	7 1/16x3x¼	C
♦ 59	....(c.o.e.) 812A	4-7	3230	97	193	.....	6700	9.00/20D	9.75/20	Own 318	6-3⅞x4½	318	5.5	234	94-2600	7-2⅞x10.7	Y	Own 54B	5	Own 33C	SF	H	5.22-7.14	Own 30D	L4IHV	525	824	a	TX	60	8x3x¼	C
♦ 60	....(c.o.e.) 818A	4½-8	3595	97	193	.....	7275	9.75/20D	10.50/20	Own 318	6-3⅞x4½	318	5.5	234	94-2600	7-2⅞x10.7	Y	Own 54B	5	Own 26C	2F	R	7.23-8.73	Own 28D	L4IHV	491	772	a	TX	60	8x3x¼	P
♦ 61	..........750T	....	3600	136	160	.....	7168	9.00/20D	10.50/22	Own 362	6-3⅞x5⅛	362	5.8	280	116-3000	7-3x10.8	N	Own 51B	5	Own 34C	SF	R	6.29-7.14	Own 16D	L4IHV	629	979	a	TX	60¼	8x3x¼	T
♦ 62	800	1-1½	900	102	...	.....	2820	6.00/20S	7.50/20	Own 205	6-3¼x4⅛	205	5.8	135	61-3300	7-2¼x10¼	Y	Own 60B	3	Own 48C	SF	H	5.14-5.66	Own 35D	L4IH	264	402	G	TX	.....	6x2½x¼	C
♦ 63	802	1¼-3	995	95	155	.....	4800	6.00/20D	7.50/20	Own 221	6-3⅜x4⅛	221	5.9	154	68-3000	7-2¼x10⅛	Y	Own 62B	4	....	SF	H	5.80-6.80	Own 36D	L4IH	264	477	A	TX	60	7x2 9/32x7/32	C
♦ 64	..........704H	2-5	1650	136	226	.....	4858	7.00/20D	8.25/20	Own 270	6-3 9/16x4½	270	5.5	195	83-2800	7-2⅞x10.7	Y	Own 28B	4	Own 37C	SF	H	5.10-6.83	Own 22D	L4IHV	308	460	a	TX	60¼	7x2 25/32x7/32	T
♦ 65	750	4½-8	3600	136	226	.....	7552	9.00/20D	10.50/22	Own 362	6-3⅞x5⅛	362	5.8	280	116-3000	7-3x10.8	N	Own 51B	5	Own 43C	2F	R	7.23-8.73	Own 16D	L4IHV	560	875	d	TX	60¼	8⅛x3 1/16x3/16	TL
♦ 66	...*(c.o.e.) 820	5-9	5400	109	193	.....	8816	9.75/20D	10.50/22	Own 434	6-4 3/16x5¼	434	5.0	295	116-2400	7-2¾x13⅛	Y	Own 58B	5	Own 43C	2F	R	7.23-8.73	Own 34D	L4IHV	510	843	a	TD	72	8⅛x3 1/16x3/16	C
♦ 67	...*(c.o.e.) 822	8-10	6400	109	193	.....	9403	10.50/20D	11.25/24	Own 529	6-4⅝x5¼	529	5.0	365	130-2400	7-2¾x13⅛	Y	Own 58B	5	Own 45C	2F	R	6.67-9.50	Own 34D	O4IA	603	961	a	TD	72	8⅛x3 1/16x3/16	P
68	Willys...(21) SC38	1000lbs	330	100	100	3350	1300	5.50/16S	6.00/16S	Own 38	4-3⅛x4⅜	134	5.7	100	48-3200	3-2.3x5.8	N	WG T82D	3	Sal 21-1	S	H	4.7-5.10	Own 38	B4IM	135	198	s	4	29⅝	3¾x1¾x3/16	X
	Four-Wheel-Drive																															
69	Auto-(1)(d)4x4 DF	......	5000	163	163	20000	8415	9.00/20D	9.00/20	Own 404	6-4¼x4¾	404	5.5	295	97-2200	7-3x14¾	Y	Own DF4	8	Tim 5002	2F	H	**7.35	Tim F501	T4IMV	417	659	c	2I	84½	9x3x¼	T
70	car..(d) 4x4 N	......	6000	167	167	24000	9900	9.75/20D	9.75/20	Own 404	6-4¼x4¾	404	5.5	295	97-2200	7-3x14¾	Y	Own DF4	8	Tim 72000	2F	H	**7.27	Tim F213	T4IMV	568	866	c	2I	88½	9x3x¼	T
71	.....(d) 4x4 NF	......	6750	168	168	26000	10915	9.75/20D	9.75/20	Own 453	6-4½x4¾	453	5.5	333	108-2200	7-3x14¾	Y	Own TF4	8	Tim 1337	2F	H	**7.52	Tim F313	T4IMV	639	975	c	2I	89½	10½x3x3/16	T
72	.....(d) 4x4 S	......	7250	168	168	30000	11145	10.50/20D	10.50/20	Own 501	6-4½x5¼	501	5.5	375	123-2200	7-3¼x14 11/16	Y	Own TF4	8	Tim 1337	2F	H	**7.52	Tim F313	T4IMV	639	975	c	2I	89½	10½x3x3/16	T
73	Clydesdale 80 (4x4)	2½-4	6480	160	190	18000	5900	7.50/20D	9.00/20	Con E602	6-4¼x4¼	361	5.4	252	96-2500	7-2⅝x12 13/16	Y	Cla 270V	5	Wis 5002L	W/2	H	....	Wis F551H	L4IHV	335	782	A	CD	61	9¾x2¾x¼	T
74	..(D) 105D (4x4)	5-7	(23)	170	190	30000	10600	9.75/20D	12.00/20	Bud 6LD468	6-4¼x5½	468	12	342	118-2200	7-3x11½	Y	Fu 5A620	5	Wis 1737 KW	W/2	H	....	Wis F417W	Ws4IA	654	1080	A	CD	71	10x3x⅜	T
75	..(D) 90D (4x4)	4-5	(23)	160	190	23500	8700	9.00/20D	10.50/24	Bud 6LD415	6-4x5½	415	12	305	105-2200	7-3x11½	Y	Cla 270VO	5	Wis 1337BH	W/2	H	....	Wis 313H	L4IHV	625	974	A	CD	61	9¾x2¾x¼	T
76	..(D) 70D (4x4)	2½x3	(23)	160	190	18000	5900	7.50/20D	9.00/20	Bud 6LD275	6-3½x4¾	275	12	204	86-2600	7-3x11½	Y	Cla 200VO	5	Tim 59300H	W/2	H	....	Wis F582H	L4IHV	335	782	A	CD	61	9¾x2¾x¼	T

* White—Chassis price includes price of cab.

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77	Coleman.....E-52	2½	3905	120	144	12800	7200	9.00/24S	9.00/24	Bud K-393	6-4 3/16x4¾	393	4.9	260	103-2600	7-3x11½	Y	Fu RU16	4	Wis CR15	2F	H	4.66-8.05	Ow-Wis CF15	W2/41H	245	434	G	TD	78	10x2½x⅞	B
78	E-53	3½	5445	130	180	18600	8000	9.75/24S	9.00/24	Bud K-428	6-4⅜x4¾	428	4.8	280	107-2600	7-3x11½	Y	Fu MRU16	4	Wis CR30	2F	..	6.6-9.66	Ow-Wis CF30	W2/41M	360	542	G	TD	88	12x2½x⅞	B
79	E-54	4½	5775	130	180	21400	8800	10.50/24S	9.75/24	Bud L-468	6-4¼x5½	468	4.8	295	105-2400	7-3x11½	Y	Fu MRU16	4	Wis CR30	2F	..	6.6-9.66	Ow-Wis CF30	W2/41M	360	542	G	TD	88	12x2½x1⅛	B
80	E-55	5	6325	130	180	23000	9600	11.25/24S	10.50/24	Bud L-525	6-4½x5½	525	4.9	336	112-2200	7-3x11½	Y	Fu MRU16	4	Wis CR30	2F	..	6.6-9.66	Ow-Wis CF30	W2/41M	360	542	G	TD	88	12x2½x1⅛	B
81	E-56	6-7½	8580	144	180	29800	11600	10.50/24D	11.25/24	Bud GF-6	6-4¾x6	638	4.3	410	126-1850	4-3x10 7/16	Y	Fu MHU12	4	Wis CR122	2F	..	7.69-9.54	Ow-Wis CF12	W2/41M	360	542	G	TD	104	12x2⅝x1¼	B
82	E-57	7½	10670	144	180	32000	12200	11.25/24D	11.25/24	Ster LT-6	6-5¼x6	779	4.3	475	170-1800	7-3x13½	Y	BL 714	4	Wis CR122	2F	..	7.69-9.54	Ow-Wis CF12	W2/41M	360	542	G	TD	104	16x2⅝x1¼	B
83	(19) A-68	10	12000	144	180	38100	14000	11.25/24D	11.25/24	Bud GF-6	6-4¾x6	638	4.3	410	126-1850	4-3x10 7/16	Y	Fu MHU12	4	Own RDR	....	..	6.00-9.87	Own FDR	B2/41A	440	628	G	TD	104	16x3x1¼	B
♦ 84	Corbitt.....F-12	1½-2½	2375	143	180	.....	4460	6.50/20D	8.25/20	Con A6244	6-3 7/16x4⅜	244	5.4	170	83-3200	4-2⅜x6⅝	N	WG T9	8	Tim 53521H	SF	H	5.14-6.6	Wis F30B	L4IH	270	452	a	TX	Opt	7⅞x3½x5/16	T
♦ 85	F-14	2-3	3200	145	182	.....	5060	7.50/20D	8.25/20	Con M6271	6-3⅝x4⅜	271	5.7	191	85-2900	7-2⅝x12 1/32	N	Cla B116C	8	Tim 54411H	SF	H	5.83-6.8	Wis F544B	L4IH	335	578	a	TD	Opt	8x3½x¼	T
♦ 86	F-18	2½-4	4500	155	185	.....	6900	8.25/20D	9.00/20	Con E-602	6-4⅛x4½	361	5.4	252	95-2500	7-2⅝x13	N	Fu MGU	8	Wis 5002L	2F	H	6.00-8.21	Wis F501H1	L4IH	335	578	a	TD	Opt	9x2½x¼	D
♦ 87	F-19	2½-4	4300	155	185	.....	6500	8.25/20D	9.00/22	Con M-6338	6-4x4⅜	330	5.5	233	98-2800	7-2⅝x12 1/32	Y	Fu 5A330	10	Wis 5002L	2F	H	6.62-8.21	Wis F551H	L4IHV	335	578	a	TD	Opt	8x3½x¼	T
♦ 88	F-23	3-6	5500	160	190	.....	9000	9.00/20D	9.75/22	Con 20-R	6-4⅛x4¾	381	4.8	276	106-2600	7-2¾x13 5/16	N	Fu 5A430	10	Wis 72300H	2F	H	5.61-8.40	Wis F213H	L4IHV	534	786	a	TD	Opt	8⅛x3½x5/16	T
♦ 89	F-27	4-7	6800	170	210	.....	10000	9.75/22D	10.50/22	Con 21-R	6-4⅜x4¾	428	4.6	308	118-2500	7-2¾x13 5/16	N	Fu 5A620	10	Wis 1337BH	2F	H	6.36-8.59	Wis F313H	L4IHV	625	976	a	TD	Opt	12¼x3¼x5/16	T
♦ 90	F-35	6-10	8500	185	210	.....	12500	10.50/20D	11.25/24	Con 22-R	6-4½x5¼	501	4.5	364	138-2450	7-2⅝x12 1/32	N	Fu 5A620	10	Wis 1737KW	2F	H	6.39-9.16	Wis F417KW	Ws4IA	701	976	a	TD	Opt	12¼x3¼x5/16	T
91	F. W. D.....HS	....	2600	132	156	13000	4700	6.50/20D	8.25/20	Wau BK	6-3¾x4¼	282	5.2	188	85-3200	7-2⅝x10¼	Y	Fu 5B33	5	Ti 53543HX1	SF	H	6.85-.80	Wis F33-H8	L4IHV	286	452	G	T4	67¾	7 11/16x2¾x7/32	C
92	HH6	3-4	4380	138	170	18700	7100	9.75/20S	11.25 20	Wau MK	6-4⅛x4¾	381	6.1	256	85-2500	7-2⅝x12½	Y	BL 3352	5	Own HU	BF	H	6.7-8.84	Own HU	L4IHV	496	867	G	T4	85	7x3x7/32	C
93	SUA	4-5	5440	150	182	23600	8600	11.25/20S	11.25/20	Wau SRL	6-4⅜x5⅛	462	4.6	305	102-2400	7-3x13⅞	Y	Fu 5A62	5	Own 1938	BF	H	6.7-8.9	Own 1937	L4IHV	496	867	G	T4	90	7x3x11/32	C
94	SU	4-5	5640	150	182	24000	8900	11.25/20S	11.25/20	Wau SRL	6-4⅜x5⅛	462	4.6	305	102-2400	7-3x13⅞	Y	Own U	5	Own 1938	BF	H	6.7-8.9	Own 1937	L4IHV	496	867	G	T4	90	7x3x11/32	C
95	YU	5-6	6300	150	182	26000	9500	9.75/20D	11.25 20	Wau SRK	6-4⅝x5⅛	517	4.5	330	110-2300	7-3x13⅞	Y	Own U	5	Own 1938	BF	H	6.7-8.9	Own 1938	L4IHV	496	867	G	T4	90	8x3x11/32	C
96	MJ5	5-6	6700	150	180	27700	11200	9.75/20D	12.75/20	Wau SRK	6-4⅝x5⅛	517	4.5	330	110-2300	7-3x13⅞	Y	Fu 5A62	5	Wis 1337	2F	H	6.6-8.67	Wis 1337	L4IHV	578	976	G	T4	95	10x3x11/32	C
97	MJ6	6-7½	7040	150	180	29000	11400	10.50/20D	12.75/20	Wau 6-125	6-4⅜x5⅛	462	5.0	325	125-2600	7-3x13⅞	Y	BL 7440	8	Wis 1337	2F	H	6.6-8.67	Wis 1337	L4IHV	578	976	G	T4	95	10x3x11/32	C
98	M7	7½-10	8800	150	180	37600	12300	12.75/20S	13.50/20	Wau RB	6-5x5¾	677	5.3	465	145-2000	4-3½x11⅜	Y	BL 7440	8	Wis 1757	2F	H	6.4-8.4	Wis 1757	L4IHV	578	976	G	T4	95	10x3x11/32	C
99	M10	10-12	10400	150	180	40000	13400	13.50/20S	13.50/24	Her HXE	6-5¾x6	935	5.3	615	198-2000	7-3½x16⅝	Y	BL 7440	8	Wis 1910	2F	H	7.16-9.35	Wis 1910	W4IA	665	1030	G	T4	95	10x3x11/32	C
100	T26	6-7	2825	144	144	26000	5100	8.25/20D	9.00 20	Wau BK	6-3¾x4¼	282	5.2	188	85-3200	7-2⅝x10¼	Y	Fu 5B330	5	Ti 53543HX1	SF	H	5.6-8.0	Wis F33-H8	L4IHV	286	452	G	T4	68	7 11/16x2¾x7/32	C
101	T32	7½-10	4890	132	132	32000	9000	9.00/20D	9.75/20	Wau 110	6-4x4¾	358	5.0	254	110-2800	7-2⅝x12½	Y	Fu 5A430	5	Own HU	BF	H	7.3-9.8	Own HU	L4IHV	568	868	G	T4	70⅝	10x3x¼	C
102	T40	10-15	5450	134	134	40000	10500	9.75/20D	10.50/20	Wau 125	6-4⅜x5⅛	462	5.0	325	125-2600	7-3x13⅞	Y	Fu 5A620	5	Own U	BF	H	7.3-11.2	Own U	L4IHV	568	868	G	T4	71	10x3x¼	C
103	T60	15-25	6935	134	134	60000	11000	9.75/20D	10.50/20	Wau RB	6-5x5¾	677	5.3	465	145-2000	4-3½x11⅜	Y	BL 7351	5	Own MF	BF	H	5.2-14.9	Own MF	W4IA	568	868	G	T4	80	10x3x11/32	C
104	T65	20-28	8935	134	134	65000	11300	10.50/20D	10.50/20	Wau RB	6-5x5¾	677	5.3	465	145-2000	4-3½x11⅜	Y	BL 7481	8	Wis 1757	2F	H	5.4-8.3	Wis 1757	W4IA	666	976	G	T4	80	10x3x11/32	PC
105	T72	25-30	10400	120	120	72000	13400	13.50/20D	13.50/20	Her HXE	6-5¾x6	935	5.3	612	198-2000	7-3½x16⅝	Y	BL 7440	8	Wis 1910	2F	H	7.16-9.35	Wis 1910	W4IA	639	976	G	T4	65	10x3x11/32	PC
♦ 106	Hug.....44-4	4-5	(23)	150	160	24000	9600	10.50/20	10.50/20	Wau 6SRL	6-4⅜x5⅛	462	4.6	302	102-2000	7-3x12⅜	Y	Fu 5A620	5	Wis 72000	2F	H	5.00-7.27	Wis F213	L4IHV	536	864	a	TD	70¾	9⅛x3x5/16	T
♦ 107	45-4	5-7½	(23)	150	160	29000	11000	10.50/20S	10.50/20	Wau 6SRK	6-4⅝x5⅛	517	4.5	330	110-2200	7-3x12⅜	Y	Fu 5A620	5	Wis 1337	2F	H	5.53-8.59	Wis F313	L4IHV	625	972	a	TD	70¾	9⅛x3x5/16	T
♦ 108	46-4	7½-10	(23)	160	170	35000	11800	11.25/20S	11.25/20	Wau 6GAL	6-5x5½	648	4.6	468	130-1900	7-4x18⅝	Y	Spl 7351	5	Wis 1737	2F	H	5.75-9.16	Wis F417	W4IA	654	972	a	TD	86½	10x3x⅜	T
109	Indiana.....12X4	1½-2	(20)	131	Op	.....	4650	6.50/20D	7.50/20	Her JXC	6-3¾x4¼	282	5.4	176	73-2800	7-2½x10 11/16	Y	BL 2341	4	Tim 53210	SF	H	5.14-5.66	Wis F30B	L4IHV	260	412	G	TD	46⅝	7 1/16x2½x5/32	T
110	14X4	2-2½	(20)	140	Op	.....	5900	7.50/20D	8.25/20	Her JXC	6-3¾x4¼	282	5.4	176	73-2800	7-2½x10 11/16	Y	BL 2341	4	Tim 54413	SF	H	5.14-6.6	Wis F54F	L4IHV	260	528	G	TD	55⅝	7½x2¼x¼	T
111	16X4	2½-3	(20)	156	Op	.....	7500	7.50/20D	8.25/20	Her WXC	6-4x4½	339	4.7	226	76-2400	7-2⅝x13¼	Y	BL 3341	4	Wis 5000L	SF	H	6.35-7.35	Wis F500	L4IHV	330	578	G	TD	72½	7½x3x¼	T
112	18X4	4½-5	(20)	160	Op	.....	9000	9.00/20D	9.75/20	Her YXC	6-4⅜x4¾	428	4.5	283	94-2200	7-3x14	Y	BL 5341	4	Wis 72000L	2F	H	7.06-8.00	Wis F213	L4IHV	492	867	G	TD	72	8⅛x3x5/16	T
113	18X4A	4½-5	(20)	160	Op	.....	8700	9.00/20D	9.75/20	Her YXC	6-4⅜x4¾	428	4.5	283	94-2200	7-3x14	Y	BL 5341	4	Tim 58205H	SF	H	6.14-6.83	Wis F580H	L4IHV	345	785	G	TD	72	8x3x¼	T
114	20X4	5-6	(20)	172	Op	.....	10600	9.75/20D	9.75/20	Her RXB	6-4½x5¼	501	4.5	330	106-2000	7-3x12½	Y	BL 5341	4	Wis 1337H	2F	H	7.52-8.59	Wis F311H	L4IHV	582	975	G	TD	84	8¼x3x⅜	T
115	22X4	5½-6½	(20)	185	Op	.....	13000	10.50/20D	10.50/20	Her HXB	6-5x6	707	4.5	455	148-2000	7-3½x17	Y	BL 7341	4	Wis 417W	2F	H	7.14-9.15	Wis 1737W	Ws4IA	648	975	G	TD	84	10x3x5/16	T
♦ 116	Marmon.....LD2-4	½	1370	113	113	.....	2460	7.50/15S	9.00/15S	Ford V-8	8-3 1/16x3¾	221	6.12	146	85-3800	3-2.4x5⅜	N	Ford	4	Ford	S¾	U	** 4.44	Own LD1	4IM	186	293	a	2/4I	36½	5½x2x.11	C
♦ 117	Herrington.....E5-4	1½-3	1375	132	132	.....	4040	6.00/20D	32x6	Ford V8	8-3 1/16x3¾	221	6.12	146	85-3800	3-2.4x5⅜	N	Ford	4	Ford	SF	U	** 6.67	Own IX41	4IH	314	421	a	2/4I	58	7x2¾x7/32	C
♦ 118	E6-4	1½-3	1425	157	157	.....	4154	6.00/20D	32x6	Ford V8	8-3 1/16x3¾	221	6.12	146	85-3800	3-2.4x5⅜	N	Ford	4	Ford	SF	U	** 6.67	Own IX41	4IH	314	421	a	2/4I	58	7x2¾x7/32	C
119	C10-4	2-2½	2490	143	Op	.....	4430	6.50/20D	7.50/20	Her JXB	6-3⅝x4¼	263	5.4	182	78-2800	7-2½x10 21/64	N	WG T9	4	Tim MH811	SF	H	** 6.6	TWH MH81	4IH	267	452	a	TX	60	7⅞x2½x7/32	C
120	C20-4	2½-3	2820	143	Op	.....	4665	7.00/20D	7.50/20	Her JXC	6-3¾x4¼	282	5.3	196	84-2800	7-2½x10 21/64	N	Fu 5A33	5	Tim MH811	SF	H	** 6.6	TWH MH81	4IH	267	452	a	TX	60	7⅞x2½x7/32	C
121	C30-4	3-3½	3250	143	Op	.....	5155	7.50/20D	8.25/20	Her JXD	6-4x4¼	320	5.3	224	95-2800	7-2½x10 21/64	N	Fu 5A33	5	Tim MH822	SF	H	** 6.8	TWH MH82	4IH	281	527	a	TX	60	7⅞x2½x7/32	C
122	C40-4	3½-4	4550	158	Op	.....	7000	8.25/20D	9.00/20	Her WXC3	6-4¼x4½	383	5.0	260	106-2800	7-2⅝x13¼	Y	Fu 5A430	5	Tim MH833	SF	H	** 5.5	TWH MH83	4IH	342	578	a	FD	72	9 11/16x3x¼	C
123	C50-4	4-5	4995	158	Op	.....	7895	9.00/20D	9.75/20	Her WXLC3	6-4¼x4¾	404	5.0	293	118-2800	7-2⅝x13¼	Y	Fu 5A430	5	Tim MH844	SF	H	** 7.8	TWH MH84	4IH	384	785	a	FD	72	9 11/16x3x¼	C
124	C55-4	4½-5½	5400	158	Op	.....	8100	9.00/20D	9.75/20	Her RXB	6-4½x5¼	501	4.5	330	110-2200	7-3x14	Y	Fu 5A62	5	Tim MH844	SF	H	** 7.8	WH MH84	4IH	384	785	a	FD	72	9 11/16x3x¼	C
♦ 125	C55DR-4	6-7	6120	158	Op	.....	8500	9.00/20D	9.75/20	Her RXB	6-4½x5¼	501	4.5	330	110-2200	7-3x14	Y	Fu 5A62	5	Wis MH888	2F	H	** 7.52	WH MH88	4IH	738	975	a	FD	72	9 11/16x3x¼	C
126	C60-4	5-6	6500	161	Op	.....	8785	9.00/20D	9.75/20	Her RXB	6-4½x5¼	501	4.5	330	110-2200	7-3x14	Y	Fu 5A620	5	Wis MH866	2F	H	** 7.27	WH MH86	4IH	461	785	a	FD	72	9 11/16x3x¼	C
127	C70-4	6-7	8895	161	Op	.....	9880	9.75/20D	9.75/22	Her RXB	6-4½x5¼	501	4.5	330	110-2200	7-3x14	Y	Fu 5A620	5	Wis MH899	2F	H	** 7.52	WH MH89	4IA	738	975	a	FD	72	10 1/16x3x5/16	C
128	C80-4	7-9	9750	161	Op	.....	10420	10.50/20D	10.50/22	Her RXC	6-4⅝x5¼	529	4.9	350	114-2200	7-3x14	Y	Fu 5A620	5	Wis MH900	2F	H	** 8.05	WH MH90	4IA	738	975	a	FD	72	10 1/16x3x5/16	C
129	TH515-4	7-9	11910	198	Op	.....	12600	10.50/20D	10.50/20	Her HXD	6-5⅛x6	855	4.5	555	180-2000	7-3½x17	Y	BL 7341	4	Wis MH900	2F	H	** 8.05	WH MH90	4IA	738	975	a	FD	102	8⅛x3x5/16	P
130	TH520-4	8-10	12900	198	Op	.....	13850	10.50/20D	10.50/24	Her HXE	6-5¾x6	935	4.5	610	198-2000	7-3½x17	Y	BL 7341	4	Wis MH911	2F	H	** 8.88	WH MH91	4IA	738	975	a	FD	102	10⅛x3x⅜	P
131	(D).....CD20-4	2½-3	4095	143	Op	.....	5420	7.50/20D	7.50/20	Her DJXB	6-3⅝x4¼	260	..	178	79-2600	7-3x10½	Y	Fu 5A33	5	Tim MH811	SF	H	** 5.57	TWH MH81	4IH	267	452	a	TX	60	7⅞x2½x7/32	C
132	(D).....CD30-4	3-3½	4425	143	Op	.....	5615	7.50/20D	8.25/20	Her DJXC	6-3¾x4½	298	4.5	194	90-2600	7-3x10½	Y	Fu 5A33	5	Tim MH822	SF	H	** 5.56	TWH MH82	4IH	281	527	a	TX	60	7⅞x2½x7/32	C
133	(D)...CD55DR-4	5-6	8412	158	Op	.....	9800	9.00/20D	9.75/20	Her DRXB	6-4⅜x5¼	474	...	350	124-2200	7-3x13¼	Y	Fu 5A62	5	Wis MH888	2F	H	** 6.36	WH MH88	4IH	738	975	a	FD	72	9 11/16x3x¼	C
134	(D).....CD70-4	6-7	11350	161	Op	.....	10775	9.75/20D	9.75/22	Her DRXB	6-4⅜x5¼	474	4.5	350	124-2200	7-3x13¼	Y	Fu 5A620	5	Wis MH899	2F	H	** 6.36	WH MH89	4IA	738	975	a	FD	72	10 1/16x3x5/16	C
135	(D).....CD80-4	7-9	12150	161	Op	.....	11315	10.50/20D	10.50/22	Her DRXB	6-4⅜x5¼	474	4.5	350	124-2200	7-3x13¼	Y	Fu 5A620	5	Wis MH900	2F	H	** 7.14	WH MH90	4IA	738	975	a	FD	72	10 1/16x3x5/16	C
136	(D)...THD515-4	7-9	14435	198	Op	.....	13300	10.50/20D	10.50/22	Her DHXB	6-5x6	707	4.5	530	176-1800	7-3½x17¼	Y	BL 7341	4	Wis MH900	2F	H	** 7.14	WH MH90	4IA	738	975	a	FD	102	8⅛x3x5/16	P
137	(D)...THD520-4	8-10	15135	198	Op	.....	14500	10.50/20D	10.50/24	Her DHXB	6-5x6	707	4.5	530	176-1800	7-3½x17¼	Y	BL 7341	4	Wis MH911	2F	H	** 7.95	WH MH91	4IA	738	975	a	FD	102	10⅛x3x⅜	P
138	Oshkosh.....JCB	2	2885	153	200	14000	5900	7.00/20D	9.00/20	Her JXC	6-3¾x4¼	282	5.3	197	85-3000	7-2½x10 11/16	Y	Fu	5	Own JCB	SF	H	4.4-5.2	Own JCB	L4IH	335	578	a	TX	71	6x3½x¼	P
139	JD	3	3490	153	200	15500	6050	7.50/20D	9.00/20	Her JXD	6-4x4¼	320	5.3	224	94-2800	7-2½x10 11/16	Y	Fu	5	Own JD	SF	H	4.4-5.2	Own JD	L4IH	335	578	a	TX	71	6x3½x¼	P
140	B3S	3½-4	5140	146	201	21500	8250	10.50/20S	10.50/20	Her WXC3	6-4¼x4½	383	4.7	265	106-2800	7-2⅝x13¾	Y	Fu	5	Own B3S	SF	H	4.8-7.8	Own B3S	L4IH	510	867	G	TX	78¾	7x3x½	TfL
141	B3D	4	5590	146	201	23000	8250	10.50/20S	10.50/20	Her WXC3	6-4¼x4½	383	4.7	265	100-2400	7-2⅝x13¾	Y	Fu	5	Own B3D	F2	H	5.0-8.4	Own B3D	L4IH	560	867	G	TX	78¾	7x3x½	TfL
142	C3S	4-5	5635	146	201	23800	8700	9.75/20D	11.25/20	Her YXC2	6-4½x4¾	453	4.4	300	100-2400	7-3x14	Y	Fu	5	Own C3S	SF	H	6.0-7.8	Own C3S	L4IH	518	867	G	TX	82	7x3x½	TfL
143	C3D	4-5	6185	146	201	24000	9575	9.75/20D	11.25/20	Her YXC2	6-4½x4¾	453	4.4	300	100-2400	7-3x14	Y	Fu	5	Own C3D	F2	H	5.6-8.4	Own C3D	L4IH	630	975	G	TX	82	7x3x½	TfL
144	FS	5	6275	146	201	25000	9275	10.50/20S	11.25/20	Her RXB	6-4½x5¼	500	4.4	330	110-2200	7-3x12¼	Y	Fu	5	Own FS	F2	H	6.5-8.4	Own FS	L4IH	630	975	G	TX	82	7x3x½	TfL
145	FC	6	6500	146	201	26000	9500	9.75/20D	11.25/20	Her RXB0	6-4½x5¼	500	5.4	360	121-2200	7-3x12¼	Y	Fu	5	Own FC	F2	H	5.8-6.67	Own FC	L4IH	630	975	G	TX	82	7x3x½	TfL
146	FB	6-7	6700	146	201	29000	10300	10.50/20D	11.25/20	Her RXC0	6-4⅝x5¼	529	5.4	380	128-2200	7-3x12¼	Y	Fu	5	Own FB	F2	H	5.8-6.67	Own FB	L4IH	630	975	G	TX	82	8x3x½	TfL
147	FD	7½	7650	146	201	30000	11500	10.50/20D	12.00/20	Her RXC0	6-4⅝x5¼	529	5.4	380	128-2200	7-3x13¼	Y	Fu	5	Own FD	F2	H	6.2-7.1	Own FD	L4IH	630	975	G	TX	82	8x3x½	TfL
148	BG3	10	8840	168	193	38000	14200	10.50/24D	13.50/20	Her HXB	6-5x6	707	4.5	455	148-2000	7-3½x16⅝	Y	BL	4	Own BG	F2	H	4.7-6.8	Own BG3	B4IM	666	975	G	TX	85	10x3¼x½	L
149	GD36	10-12	10400	168	193	40000	14200	13.50/20S	13.50/20	Her HXE	6-5¾x6	935	4.5	610	199-2000	7-3½x16⅝	Y	BL	4	Own GD	F2	H	5.3-7.4	Own GD	B4IM	666	975	G	TX	85	10x3¼x½	L
150	Walter.....FND	2½-3½	6200	126	150	19000	7000	9.75/20S	10.50/20S	Wau 6MK	6-4⅛x4¾	381	6.5	240	85-2500	7-2⅝x12½	Y	Own FJN	6	Own FN	2D	H	6.0-8.0	Own FN	O4IA	460	672	G	FI	84	7x2¾x¼	T
151	FQS	3-5	6700	128	150	24000	8000	9.00/20D	9.75/20	Wau 6-110	6-4x4¾	358	5.2	250	110-2800	7-2⅞x12½	Y	Own FJN	6	Own FQ	2D	H	6.0-8.0	Own FN	O4IA	460	672	G	FI	84	9x2½x¼	D
152	FJS	4-6	7500	138	150	28000	9000	9.75/20D	10.50/20	Wau 6-125	6-4⅜x5⅛	462	5.2	325	125-2500	7-3x13⅞	Y	Own FJD	6	Own FJ	2D	H	6.0-8.0	Own FJ	O4IA	460	672	G	FI	84	9x2½x¼	D
153	FMD	4-5	7200	126	150	24000	8500	9.00/20D	9.75/20	Wau 6SRL	6-4⅜x5⅛	462	5	320	110-2500	7-2⅞x12½	Y	Own FJD	6	Own FM	2D	H	6.0-8.0	Own FM	O4IA	460	672	G	FI	84	12x3½x¼	TL
154	FJMT	5	7500	114	138	28000	9000	9.75/20D	10.50/20	Wau 6-125	6-4⅜x5⅛	462	5.2	325	125-2500	7-3x13⅞	Y	Own FJD	6	Own FJM	2D	H	6.0-8.0	Own FJ	O4IA	460	672	G	FI	72	12x3½x¼	TL
155	FKMD	5	7500	126	150	28000	9000	9.75/20D	10.50/20	Wau 6SRK	6-4⅝x5⅛	517	5	345	120-2500	7-3x13⅞	Y	Own FJD	6	Own FJM	2D	H	6.0-8.0	Own FJ	O4IA	460	672	G	FI	84	12x3½x¼	TL
156	FCKD	5-7	8400	126	138	30000	10500	9.75/24D	10.50/24	Wau 6SRK	6-4⅝x5⅛	517	5	345	120-2500	7-3x13⅞	Y	Own FC	6	Own FC	2D	H	7.5-9.0	Own FC	O4IA	552	888	D	FI	84	13x3¾x¼	B
157	FCS	5-7	8600	138	162	30000	11000	9.75/24D	10.50/24	Wau 6SRK	6-4⅝x5⅛	517	5	345	120-2500	7-3x13⅞	Y	Own FC	6	Own FC	2D	H	7.5-9.0	Own FC	O4IA	552	888	D	FI	96	14x3¾x¼	B
158	FBS	5-8	9900	138	162	30000	11500	10.50/24D	11.25/24	Wau 6RB	6-5x5¾	677	5	460	150-2200	5-3½x10⅜	Y	Own FA	6	Own FB	2D	H	7.5-9.0	Own FB	O4IA	552	888	D	FI	96	14x3¾x¼	B
159	FBRS	7-10	10500	138	162	40000	12500	11.25/24D	12.00/24	Wau 6RB	6-5x5¾	677	5	460	150-2200	5-3½x10⅜	Y	Own FA	6	Own FBR	2D	H	7.5-9.0	Own FB	O4IA	552	888	D	FI	96	14x3¾x¼	B

Six-Wheelers

Wheels Driven

160	(a) Autocar (1) ▼																															
161	(a) 6x2 RL 2F	....	2715	164	182	32000	9345	8.25/20D	9.00/20	Own 358	6-4x4¾	358	5.5	250	85-2300	7-3x12⅝	Y	Own RL5	5	Own RL	2F	H	6.49-7.89	Tim 32502	LO4IDV	466	694	c	FD	84	8 11/16x3x7/32	T
162	(a) 6x2 DF 2F	....	4250	164	218	36000	10485	9.00/20D	9.75/20	Own 404	6-4¼x4¾	404	5.5	295	97-2200	7-3x14⅜	Y	Own DF5	5	Own DFA	2F	H	6.49-7.89	Tim 35100	LO4IDV	580	930	c	FD	84	9x3x¼	T
163	(a) 6x2 NF 2F	....	5300	182	218	40000	11985	9.75/20D	10.50/20	Own 453	6-4½x4¾	453	5.5	333	108-2200	7-3x14⅜	Y	Own TF5	5	Own C	2F	H	7.20-9.43	Tim 26452	LO4IDV	580	930	c	FD	102	10⅜x3x¼	T
164	(a) 6x2 T 2F	....	5900	208	222	45000	12985	9.75/20D	10.50/20	Own 501	6-4½x5¼	501	5.5	375	123-2200	7-3¼x14 11/32	Y	Own TF5	5	Own CG	2F	H	7.69-8.52	Tim 26452	TO4IA	631	930	c	FD	128	10½x3x5/16	T
165	6x4 DF 4R	....	5750	139	139	35000	11005	9.00/20D	9.00/20	Own 404	6-4¼x4¾	404	5.5	295	97-2200	7-3x14⅜	Y	Own DF5	5	Tim SD252H	2F	H	7.66-8.44	Tim 35100	L4IHV	667	758	c	FD	59	9x3x¼	TL
166	6x4 TO 4R	....	8550	184	184	40000	14115	9.75/20D	9.75/20	Own 501	6-4½x5¼	501	5.5	375	123-2200	7-3¼x14 11/32	Y	Own TF5	5	Tim SDD352	2F	H	8.15-9.11	Tim 26452	T41A	598	907	c	FD	104	10½x3x5/16	TL

♦ Denotes New Models or Change in Specifications.

For abbreviations see page 269

Line Number	MAKE AND MODEL	GENERAL (See Keynote): Tonnage Rating	Chassis Price	Standard Wheelbase	Max. W. B. Furnished	Gross Vehicle Weight with Max. Tires	Chassis Wt. (Stripped)	TIRE SIZES (D-dual rear, S-single rear): Standard Front and Rear	Maximum Tire Size Furnished	ENGINE DETAILS: Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings: Number, Diameter and Length	Governor Standard	TRANS-MISSION: Make and Model	Forward Spds'	REAR AXLE: Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	FRONT AXLE: Make and Model	BRAKES: SERVICE: Make Location Type Operat'n	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimension (Std. W. B.)	FRAME: Side Rail Dimensions	Type
	Six-Wheelers (Continued) Wheels Driven																															
	Autocar (Con't).																															
1	6x4 TD 4R	....	8700	142	142	40000	14415	9.75/24D	9.75/24	Own 501	6-4½x5¼	501	5.5	375	123-2200	7-3¼x14 13/64	Y	Own TF4A3	12	Tim SDD352	2F	H	8.15-9.11	Tim 26452	T4IA	598	907	c	FD	62	9x3x¼	TL
2	6x4 TC 4R	....	9500	142	142	52000	15045	10.50/24D	10.50/24	Own 501	6-4½x5¼	501	5.5	375	123-2200	7-3¼x14 13/64	Y	Own TF4A3	12	Tim SDD452	2F	H	8.15-9.11	Tim 26452	T4IA	598	907	c	FD	62	10½x3x 3/16	TL
3	(a) 6x2 UD 2F	....	4700	127	145	32000	10930	9.00/20D	9.75/20	Own 358	6-4x4¾	358	5.5	250	85-2300	7-3x12⅝	Y	Own UDF5	5	Own C	2F	H	7.20-9.43	Tim 35100	LO4IDV	580	930	c	FD	102¼	8x3x¼	T
4	(a) 6x2 UN 2F	....	5200	128	163	36000	11660	9.00/20D	9.75/20	Own 404	6-4¼x4¾	404	5.5	295	97-2200	7-3x14⅜	Y	Own UDF5	5	Own C	2F	H	7.20-9.43	Tim 26452	LO4IDV	580	930	c	FD	103¼	9x3x¼	T
5	(a) 6x2 UNF 2F	....	5500	128	163	40000	12290	9.75/20D	10.50/20	Own 453	6-4½x4¾	453	5.5	333	108-2200	7-3x14⅜	Y	Own UTF5	5	Own C	2F	H	7.20-9.43	Tim 26452	LO4IDV	580	930	c	FD	103¼	9x3x¼	T
6	(a) 6x2 UT 2F	....	5800	145	163	45000	13130	9.75/20D	10.50/20	Own 501	6-4½x5¼	501	5.5	375	123-2200	7-3¼x14 13/64	Y	Own UTF5	5	Own CG	2F	H	7.69-8.52	Tim 26452	TO4IA	631	930	c	FD	120¼	10⅜x3x¼	T
7	6x4 UTO 4R	....	8500	118	118	40000	13590	9.75/20D	9.75/20	Own 501	6-4½x5¼	501	5.5	375	123-2200	7-3¼x14 13/64	Y	Own UTF5	5	Tim SDD352	2F	H	8.15-9.11	Tim 26452	T4IA	598	907	c	FD	93¼	9x3x¼	TL
8	6x4 UTD 4R	....	8750	109	109	48000	13490	9.75/24D	9.75/24	Own 501	6-4½x5¼	501	5.5	375	123-2200	7-3¼x14 13/64	Y	Own UTF5	5	Tim SDD352	2F	H	8.15-9.11	Tim 27452	T4IA	598	907	c	FD	84¼	9x3x¼	TL
9	Bro'kway 180XSBT	5-7	4350	195	207	.....	9800	8.25/20D	9.00/22	Con 32B	6-4⅛x4½	361	5.4	252	95-2500	7-2⅝x13	Y	Fu 5A38	5	Tim 251SBT	SF	R	5.57-6.83	Shu 15695B1	L6IHV	685	1224	a	CD	125 3/16	8¼x3x⅜	B
10	.180XSBT Spec.	5-7	4950	195	207	.....	10270	8.25/20D	9.00/22	Con 34B	6-4⅜x4½	427	4.2	398	118-2600	7-2¾x13 5/16	Y	Fu 5A53	5	Tim 251SBT	SF	R	5.57-6.83	Shu 15695B1	L6IHV	685	1224	a	CD	125 3/16	8¼x3x⅜	B
	Clydesdale																															
11	..(D) 300D (6x6)	7½-12	16750	192	220	50000	15100	10.50/20D	11.25/24	Bud 6LD691	6-4¾x6½	691	12	453	148-2000	7-3½x19½	Y	BL 7341	4	Tim SD452	2F	H	7.92-9.98	Wis F310W	Ws61A	104	1625	A	TD	80	12x3x⅜	T
12	.......300 (6x6)	7½-12	14750	192	220	50000	14900	10.50/20D	11.25/24	Her HXC	6-5¼x6	779	4.5	506	168-2000	7-3½x12¼	Y	BL 7341	4	Tim SD452	2F	H	7.92-9.98	Wis F310W	Ws61A	104	1625	A	TD	80	12x3x⅜	T
13	Corbitt. 16SB2 2F	2½-4	2000	175	200	.....	5300	7.50/20D	7.50/20	Wau 6BK	6-3¾x4¼	282	5.4	190	80-2800	7-2⅝x10¼	N	Cla B116	4	Tim SBT75	SF	A	5.14-6.6	Tim 30020H	L6IHV	382	608	a	TX	Opt	7x3½x¼	T
14	.....24SB2 2F	4-6	3750	175	200	.....	7670	8.25/20D	8.25/20	Wau 6MK	6-4⅛x4¾	381	4.8	240	85-2400	7-2⅝x12½	N	Fu 5A430	5	Tim SBT151	SF	A	5.8-6.8	Tim 33000H	L6IHV	544	930	a	TX	Opt	8x3½x¼	T
15	.....30SB2 2F	6-8	4800	190	225	.....	9100	9.00/20D	9.00/20	Wau 6SRL	6-4⅜x5⅛	462	4.5	300	100-2200	7-3x13⅞	N	Fu 5A620	5	Tim SBT251	SF	A	5.28-7.4	Tim 33000H	L6IHV	636	1096	a	TD	Opt	8x3½x¼	T
16	.....36SD2 2F	8-10	5800	190	225	.....	10760	9.75/20D	9.75/20	Wau 6-125	6-4⅜x5⅛	462	5.2	330	125-2500	7-3x13⅞	N	Fu 5A620	5	Tim SDT320	2F	A	5.56-7.8	Tim 35000H	L6IA	918	1306	a	TD	Opt	8x3½x¼	T
17	.....18SD4 4R	2½-4	3950	Op	Op	.....	5800	6.50/20D	7.50/20	Wau 6MK	6-4⅛x4¾	381	4.8	240	85-2400	7-2⅝x12½	N	Fu 5A430	5	Tim SD75	w/2	A	5.14-6.6	Tim 33000H	L6IHV	396	678	a	TX	Opt	7x3½x¼	T
18	.....26SD4 4R	4-6	5720	Op	Op	.....	9000	7.50/20D	9.00/20	Wau 6MZ	6-4¼x4¾	404	6.0	274	90-2400	7-2⅝x12½	N	Fu 5A430	5	Tim SD151	w/2	A	5.28-7.4	Tim 33000H	L6IHV	574	930	a	TX	Opt	8x3½x¼	T
19	.....33SD4 4R	6-8	6380	Op	Op	.....	10000	8.25/20D	9.75/20	Wau 6SRL	6-4⅜x5⅛	462	4.5	300	100-2200	7-3x13⅞	N	Fu 5A620	5	Tim SD251	w/2	A	5.56-7.8	Tim 35000H	L6IHV	636	1096	a	TD	Opt	8x3½x¼	T
20	.....40SD4 4R	8-10	8800	Op	Op	.....	11500	9.00/20D	10.50/22	Wau 6SRK	6-4⅝x5⅛	517	4.6	330	110-2200	7-3x13⅞	N	Fu 5A620	5	Tim SD352W	w/2	A	5.85-9.41	Tim36000TW	Ws6IA	824	1306	a	TD	Opt	8x3½x¼	T
21	.....54SD4 4R	10-15	11000	Op	Op	.....	13000	9.75/20D	11.25/22	Wau 6-125	6-4⅜x5⅛	462	5.2	330	125-2500	7-3x13⅞	N	Fu 5A620	5	Tim SD452W	w/2	A	7.92-9.98	Tim27450TW	Ws6IA	964	1516	a	TD	Opt	12¼x3¼x 3/16	T
22	.....18SD6 6	2½-4	5500	Op	Op	.....	7300	6.50/20D	7.50/20	Wau 6MZ	6-4¼x4¾	404	6.0	274	90-2400	7-2⅝x12½	N	Fu 5A430	5	Tim SD75	2F	A	5.14-6.6	Wis F75AB	L6IHV	396	678	a	TX	Opt	8x3½x¼	T
23	.....26SD6 6	4-6	7500	Op	Op	.....	8200	7.50/20D	9.00/20	Wau 6SRK	6-4⅝x5⅛	462	4.5	300	100-2200	7-3x13⅞	N	Fu 5A620	5	Tim SD151	2F	A	5.28-7.4	Wis F211	Ws6IA	638	1139	a	TD	Opt	8x3½x¼	T
24	.....40SD6 6	6-8	8900	Op	Op	.....	11700	8.25/20D	9.75/20	Wau 6RB	6-5x5¾	677	4.4	440	125-1800	4-3½x11⅜	N	Fu MHU	4	Tim SD251	2F	A	5.56-7.8	Wis F211	Ws6IA	852	1305	a	TD	Opt	8x3½x¼	T
25	.....54SD6 6	8-10	12300	Op	Op	.....	14600	9.00/20D	11.25/22	Wau 6RB	6-5x5¾	677	4.4	440	125-1800	4-3½x11⅜	N	Fu MHU	4	Tim SD352W	2F	A	6.85-9.41	Wis F311	Ws6IA	1084	1625	a	TD	Opt	12¼x3¼x 3/16	T
26	.....54SD6 6	10-15	16900	Op	Op	.....	15400	9.75/22D	10.50/22	Her HXC	6-5¼x6	779	4.5	508	164-2000	7-3½x17	N	BL 7341	4	Tim SD452W	2F	A	7.92-9.98	Wis F311W	Ws6IA	1084	1625	a	TD	Opt	12¼x3¼x 3/16	T
27	Day-Elder 151T 2R	3	1755	156	199	15000	5300	6.00/20D	8.25/20	Her JXB	6-3⅝x4¼	263	4.4	164	68-2800	7-2½x10 13/16	Y	WG T9	4	TimSBT75H	BF	H	4.56-6.6	Tim 30000H	L6IHV	422	606	a	XF	77½	7x3½x¼	C
28	........211T 2R	4	2235	156	199	21000	6400	32x6D	32x6	Her JXC	6-3¾x4¼	282	4.4	176	73-2800	7-2½x10 13/16	Y	WG T9	4	Ti SBT151H	BF	R	4.44-7.4	Tim 31000H	L6IHV	529	930	a	XF	108½	7x3½x¼	C
29	........251T 2R	5	3020	165	204	25000	8100	32x6D	8.25/20	Her WXC	6-4x4½	339	4.7	234	94-2800	7-2⅝x13¼	Y	Fu MLU	4	Ti SBT251H	BF	R	4.55-7.8	Tim 33000H	L6IHV	636	1094	a	DF	118½	9x3½x¼	C
30	........281T 2R	6	3440	165	204	28000	8300	8.25/20D	9.00/20	Her WXC3	6-4¼x4½	383	4.7	265	106-2800	7-2⅝x13¼	Y	Fu MGU	4	Ti SBT251H	BF	R	4.55-7.8	Tim 33000H	L6IHV	636	1094	a	DF	118½	9x3½x¼	C
31	........301D 4R	7	4110	165	204	30000	8400	9.00/20D	9.75/20	Her WXC3	6-4¼x4½	383	4.7	265	106-2800	7-2⅝x13¼	Y	Fu 5A530	5	Ti SWD251H	WF	R	5.0-9.25	Tim 33000H	L6IHV	636	1094	a	DF	149	10x3¾x 3/16	C
32	........331D 4R	8	4995	165	234	33000	10600	9.00/20D	9.75/20	Her RXC	6-4⅝x5¼	529	4.4	350	114-2200	7-3x12½	Y	Fu 5A530	5	Ti SWD251H	WF	R	5.0-9.25	Tim 26450H	L6IHV	664	1194	a	DF	149	10x3¾x 3/16	C
33	Fageol. 226BK 2F	5-6	2633	183	196	23600	7000	7.50/20D	8.25/20	Wau 6BK	6-3¾x4¼	282	5.1	190	82-2800	7-2⅝x10¼	N	WG T9	4	Tim SBT151	BF	R	4.44-7.4	Tim 31000H	L4IHV	557	929	G	TX	104	8x3x¼	T
34	.....326HP 2F	6-8	4175	201	215	31400	8950	9.00/20D	9.75/20	Wau 6-110	6-4x4¾	358	5.2	254	110-2800	7-2⅝x12½	Y	BL 5241	4	Tim SBT251	BF	R	5.56-7.8	Tim 35020H	L4IHV	643	1093	G	FD	118½	10⅜x3½x¼	T
35	.....846HP 4R	8	7375	211	222	42000	13300	9.75/20D	10.50/20	Wau 6-125	6-4⅜x5⅛	462	5.2	324	125-2600	7-3x13⅞	Y	BL 7341	4	Tim Own	WF	R	6.0-9.25	Tim 26050N	Ws4rIA	760	1083	H	FD	124½	15x4x⅜	T
36	.....846AL 4R	8	8375	211	222	42000	11150	9.75/20D	10.50/20	Wau 6-125	6-4⅜x5⅛	462	5.2	324	125-2600	7-3x13⅞	Y	BL 7341	4	Tim Own	WF	R	6.0-9.25	Tim 26050N	Ws4rIA	760	1083	H	FD	124½	15x4x⅜	T
37	(D) 846ALD 4R	8	10400	222	233	42000	12250	9.75/20D	10.50/20	Cum 6HB	6-4⅞x6	672	17	500	150-1800	7-4½x16½	Y	BL 7341	4	Tim Own	WF	R	6.0-9.25	Tim 26050N	Ws4rIA	760	1083	H	FD	127¼	15x4x⅜	T
38	....1046RB 4R	10	8458	222	233	58000	14500	9.75/20D	10.50/20	Wau 6RB	6-5x5¾	677	4.4	440	125-1800	4-3½x11⅜	Y	BL 7341	4	Tim Own	WF	R	6.0-9.5	Tim 27050N	Ws4rIA	760	1083	H	FD	127¼	15x4x⅜	T
39	....1046AL 4R	10	9458	222	233	58000	12400	9.75/20D	10.50/20	Wau 6RB	6-5x5¾	677	4.4	440	125-1800	4-3½x11⅜	Y	BL 7341	4	Tim Own	WF	R	6.0-9.5	Tim 27050N	Ws4rIA	760	1083	H	FD	127¼	15x4x⅜	T
40	(D)1046ALD 4R	10	10800	222	233	58000	13500	9.75/20D	10.50/20	Cum 6HB	6-4⅞x6	672	17.	500	150-1800	7-4½x16½	Y	BL 7341	4	Tim Own	WF	R	6.0-9.5	Tim 27050N	Ws4rIA	760	1083	H	FD	127¼	15x4x⅜	T
♦ 41	F. W. D....MJ6X6	10	10800	184	204	40000	17200	10.50/20D	12.75/20	Wau SRK	6-4⅝x5⅛	517	4.5	330	110-2300	7-3x13⅞	Y	BL 7440	8	Wis SDD352W	2F	R	7.33-9.56	Wis 1337	W6IA	1085	1680	G	TX	120	10x3x¼	PC
♦ 42	..........M6x6	15	13585	204	228	52400	18200	13.50/20S	12.75.24	Wau RB	6-5x5¾	677	5.3	465	145-2000	4-3½x11⅜	Y	BL 7440	8	Wis SDD520W	2F	R	9.68-11.1	Wis 1910	W6IA	1085	1680	G	TX	145	10x3x¼	PC
43	Hen- A-126-T 2R	....	1990	120	210	22100	6200	6.00/20D	34x7	Wau 6BK	6-3¾x4¼	282	5.1	185	85-3200	7-2⅝x10¼	Y	Fu 5A33	5	Cla R950	BF	H	5.57-6.83	Cla F280	L6IH	423	591	C	TX	Opt	8x3x 3/16	C
44	drik'n A-165-T 2R	....	2960	140	210	27500	6800	7.50/20D	9.00/20	Wau 6BK	6-3¾x4¼	282	5.1	185	85-3200	7-2⅝x10¼	Y	Fu 5A33	5	Cla R1100	BF	H	5.66-6.87	Cla F320	L6IHV	575	800	C	TX	Opt	8x3x 3/16	P
45	....A-210-T 2R	....	3975	140	210	36500	8000	8.25/20D	10.50/20	Wau 6-110	6-4x4¾	358	4.6	254	110-2800	7-2⅝x12½	Y	Fu 5A43	5	Cla B805	BF	H	5.75-7.16	Cla F320	L6IHV	780	1070	G	TX	Opt	8x3x 3/16	P
46	....A-275-F 4R	....	3475	157	240	27500	8100	8.25/20D	9.09/20	Wau 6BK	6-3¾x4¼	282	5.1	185	85-3200	7-2⅝x10¼	Y	Fu 5A330	5	Eat 1186	BF	H	** -7.4	Cla F320	L6IHV	575	800	G	TX	Opt	8x3x 3/16	P
47	....A-375-F 4R	....	4900	160	240	37500	10500	9.00/20D	9.75/20	Wau 6-110	6-4x4¾	358	4.6	254	110-2800	7-2⅝x12½	Y	Fu 5A430	5	Eat 2.30X	BF	H	** -7.16	Tim 26450H	L6IHV	809	1175	G	TD	Opt	8x3x 3/16	P
48	....A-420-F	....	6600	160	240	42000	11200	9.75/20D	9.75/20	Wau 6-125	6-4⅜x5⅛	462	4.6	324	125-2600	7-3x13⅞	Y	Fu 5A620	5	Eat 2530X	BF	H	** -7.16	Tim 27450H	WM6IA	809	1175	G	TD	Opt	8x3x 3/16	P
49	(D)AD-420F 4R	....	8950	160	240	48000	14500	9.75/20D	9.75/20	Cum 6HB	6-4⅞x6	672	17.	500	150-1800	7-4½x16½	Y	BL 7351	5	Eat 34050	BF	R	** -7.16	Tim27450TW	WM6IA	809	1175	G	TD	Opt	8x3x 3/16	P
♦ 50	Hug........99..4R	10-12	(23)	175	175	65000	15100	11.25/20D	11.25/20	Wau 6GAL	6-5x5½	648	4.6	468	130-1900	7-4x18¾	Y	Spi 7341	4	Wis SD420	2F	T	7.33-10.2	Shu 1673	W6IA	102	1581	a	TD	92	9x4 33/64x 9/16	I
♦ 51	...(D) D99..4R	10-12	(23)	175	175	65000	15100	11.25/20D	11.25/20	Cum HB6	6-4⅞x6	672	17	500	150-1800	7-4½x16	Y	Spi 7341	4	Wis SD420	2F	T	7.33-10.2	Shu 1673	W6IA	102	1581	a	TD	92	9x4 33/64x 9/16	I
♦ 52	.........99S..4R	12-14	(23)	175	175	75000	18100	12.75/20D	12.75/20	Wau 6GAL	6-5x5½	648	4.6	468	130-1900	7-4x18¾	Y	Spi 7341	4	Wis SD520	2F	T	7.33-10.2	Shu 1673	W6IA	102	1581	a	TD	92	9x4 33/64x 9/16	I
♦ 53	..(D) D99S..4R	12-14	(23)	175	175	75000	18100	12.75/20D	12.75/20	Cum HB6	6-4⅞x6	672	17	500	150-1800	7-4½x16	Y	Spi 7341	4	Wis SD520	2F	T	7.77-10.2	Shu 1673	W6IA	102	1581	a	TD	92	9x4 33/64x 9/16	I
54	Indiana..16X6 6	3-4	(20)	160	Op	.....	8000	7.00/20D	7.50/20	Her YXC	6-4⅜x4¾	428	4.5	283	94-2200	7-3x14	Y	BL 5341	4	Wis SFD151	2F	A	5.90-7.66	Wis F200	L41HV	406	914	G	TD	72	8⅛x3x 3/16	T
55	.......18X6 6	4½-6	(20)	172	Op	.....	10500	8.25/20D	8.25/20	Her RXC	6-4⅝x5¼	529	5.4	350	111-2000	7-3x14	Y	BL 5341	4	Wis SD251H	2F	A	7.66-8.44	Wis 210	L41HV	576	1299	G	TD	84	8¼x3x⅜	T
56	.......20X6 6	5½-8	(20)	200	Op	.....	15000	9.75/20D	9.75/20	Her HXB	6-5x6	707	5.4	455	148-2000	7-3½x17	Y	BL 7341	4	Wis SFD320W	2F	A	7.33-9.11	Wis F310	Ws41A	588	1517	G	TD	99	10x3x 3/16	T
57	.......22X6 6	7½-10	(20)	200	Op	.....	16000	9.75/24D	9.75/24	Her HXB	6-5x6	707	5.4	455	148-2000	7-3½x17	Y	BL 7341	4	Wis SFD420W	2F	A	7.33-9.11	Wis F310	Ws41A	588	1517	G	TD	100	10x3x 3/16	T
	Inter-																															
58	national. C35T 2F	1½-4	1575	168	186	19000	5410	6.50/20D	7.50/20	Own FAB223	6-3 5/16x4	223	5.4	160	78-3400	4-2⅜x5 31/32	N	Own H4A	4	Own	SF	HT	5.62-7.40	OwnH108HT	B6IH	462	648	c	TX	84⅜	7 3/16x3 11/32	TL
59	.......CS35T 2F	1½-4	1670	168	186	19000	5440	6.50/20D	7.50/20	Own FAB223	6-3 5/16x4	223	5.4	160	78-3400	4-2⅜x5 31/32	N	Own H4A	4	Own	SF	HT	5.14-8.10	OwnH108HT	B6IH	462	648	c	TX	84⅜	7 3/16x3x 11/32	TL
60	....D-216-T 2F	2-4	1760	176	194	21000	6370	7.00/20D	34x7	OwnFab-241	6-3⅜x4½	241	5.8	175	84-3200	4-2⅜x5 31/32	N	Own W-42	4	Own RT-1400	SF	H	7.40-1	Own F-400	B6IHV	557	780	C	PX	102	8 7/16x 3/16x3 3/32	T
61	...DS216-T 2F	2-4	1875	176	194	21000	6470	7.00/20D	34x7	Own Fab-241	6-3⅜x4½	241	5.8	175	84-3200	4-2⅜x5 31/32	N	Own W42	4	Own RT2400	SF	HT	5.83-8.11	Own F400	B6IHV	557	780	C	TX	102	8 7/16x 3/16x3 3/32	T
62	...... C40T 2F	2-5	2200	168	204	24000	6490	7.50/20D	34x7	Own FAB223	6-3 5/16x4	223	5.4	160	78-3400	4-2⅜x5 31/32	N	Own F5	5	Own	SF	HT	5.62-7.40	Own 251½H	B6IHV	590	816	c	PX	84⅜	8 3/16x3½x 15/32	TL
63	.... C40F 4R	2-5	2975	168	204	24500	7200	7.50/20D	34x7	Own FAB223	6-3 5/16x4	223	5.4	160	78-3400	4-2⅜x5 31/32	N	Own F5	5	Own 1540	SF	HT	5.16-12.28	Own 251½H	B6IHV	590	816	c	TX	84⅜	8 3/16x3½x 15/32	TL
64	....D-246-F 4R	2½-5	3300	161	215	24000	8310	7.50/20D	36x8	Ow FBB298	6-3¾x4½	298	5.7	218	94-2800	7-2 45/64x11 51/64	Y	Own F51	5	Own RF1401	SF	H	8.19-13.1	Own F500	B6IHV	590	816	C	PX	84	7x⅜x3 3/16	C
65	....D-246-T 2F	2½-5	2850	161	215	24000	8185	7.50/20D	36x8	Ow FBB298	6-3¾x4½	298	5.7	218	94-2800	7-2 45/64x11 51/64	Y	Own F51	5	Own RT1500	SF	H	7.16-1.	Own F500	B6IHV	599	855	C	PX	84	9¼x⅜x3 3/16	C
66	......CS50T 2F	3-6	3450	170	206	28000	7980	8.25/20D	9.00/20	Ow FBB279	6-3⅝x4½	279	4.6	191	83-2900	7-2 45/64x11 51/64	Y	Own H5	5	Own 950HT	SF	H	5.62-8.74	Own 350H	B6IHV	625	892	c	TX	84¾	8 3/16x4x½	TL
67	.......C55F 4R	3½-7	4950	170	224	36700	10170	9.00/20D	9.75/20	Ow FBB298	6-3¾x4½	298	5.7	214	90-2800	7-2 45/64x11 51/64	Y	Own H5	5	Own 1555	SF	HT	5.69-11.89	Own 350HT	B6IHV	775	1106	c	TX	85½	8 11/32x4 3/16x⅝	TL
68	.......C55T 2F	3½-7	3950	170	224	36000	9315	9.00/20D	9.75/20	Ow FBB298	6-3¾x4½	298	5.7	214	90-2800	7-2 45/64x11 51/64	Y	Own H5	5	Own	SF	HT	6.43-7.16	Own 350HT	B6IHV	775	1106	c	TX	85½	8 11/32x4 3/16x⅝	TL
69	.......C60T 2F	3½-7	4075	170	224	36000	9395	9.00/20D	9.75/20	Ow FBB298	6-3¾x4½	298	5.7	214	90-2800	7-2 45/64x11 51/64	Y	Own H5	5	Own	2F	HT	7.1 -9.43	Own 350HT	B6IHV	775	1106	c	TX	84¼	8 11/32x4 3/16x⅝	TL

70	....D-346-F	4R	3½-7	5900	161	215	34000	11215	9.00/20D	9.75/20	Ow FBB401	6-4⅛x5	400	5.2	308	114-2600	7-2 11/16x11 11/16	Y	Own F52	5	Own RF1610	SF	H	7.93-12.7	Own F700	T61A	805	1192	G	PX	84	10½x3⅛x3 3/16	T
71	..DR-346-T	2F	3½-7	5000	161	215	34000	10245	9.00/20D	9.75/20	Ow FBB401	6-4⅛x5	400	5.2	308	114-2600	7-2 11/16x11 11/16	Y	Own F52	5	Own RT1660	SF	HT	**-8.05	Own F700	T61A	805	1192	G	PX	84	10½x3⅛x3 3/16	T
72	...AR-626F	4R	10-15	12500	180	253	62000	18355	9.75/24D	11.25/24	Own FEB	6-5x5½	648	4.4	460	140-2100	7-3¼x17¾	Y	Own H7	5	Own 1557	2F	RT	9.4-11.1	Own 505	T6IA	1028	1520	C	TD	92	12⅛x3½x⅝	TL
♦73	Ken-...89SBT	2F	......	3018	188	224	26500	7350	32x6D	9.00/20	Her JXCM	6-3¾x4¼	282	5.7	176	83-2500	7-2½x10 11/16	N	BL 234	4	Tim SBT151	SF	A	6.16-7.4	Tim 31000H	L6IHV	624	930	a	TX	102	8x3x½	C
♦74	worth.127SBT	2F	......	4030	188	224	28000	8000	8.25/20D	9.00/20	Her WXC2	6-4⅛x4½	361	5.0	250	100-2800	7-2⅝x13¼	N	BL 3341	4	Tim SBT151	SF	A	6.16-7.4	Tim 33000H	L6IHV	624	930	a	FD	102	8x3x½	C
♦75	....146SBT	2F	......	4509	188	224	33000	8400	9.00/20D	9.75/20	Bud K393	6-4 5/16x4¾	393	4.9	260	103-2600	7-3x11½	N	BL 3341	4	Tim SBT251	SF	A	6.8-7.8	Tim 33000H	L6IHV	720	1093	a	FD	102	8x3x½	C
♦76	.......346C	4R	......	10134	210	240	42000	14000	9.75/20D	9.75/20	HaS 175	6-5x6	707	5.0	506	179-1800	7-3¼x11 1/16	Y	BL 7341	4	Tim SW352	WF	A	6.0-7.6	Tim 36020N	Ws2rA	720	1192	a	FD	120	8x3x½	C
77	.......386C	4R	......	(23)	210	240	50100	14500	9.75/20D	10.50/20	HaS 175	6-5x6	707	5.0	506	179-1800	7-3¼x11 1/16	Y	BL 7341	4	Tim SW452	WF	A	6.0-7.6	Tim 36020N	Ws2rA	1014	1192	a	FD	120	8x3x½	C
♦78	....(D) 508	2F	......	7191	186	228	.....	11850	9.00/20D	9.75/20	Cum HB4	4-4⅞x6	448	17.	287	83-1800	5-4½x11½	Y	BL 5341	4	Ti SBT251H	SF	A	4.56-7.80	Tim 35100H	L4IH	668	1193	a	TD	102	7½x3¼x¼	C
♦79	....(D) 509	4R	......	7733	186	228	35000	12100	9.00/20D	9.75/20	Cum HB4	4-4⅞x6	448	17.	287	83-1800	5-4½x11½	Y	BL 5341	4	Tim SW251H	SF	A	5.00-9.25	Tim 35100H	L4IH	668	1193	a	TD	102	7½x3¼x¼	C
80	....(D) 510	2F	......	(23)	221	247	38000	12630	9.00/22D	9.75/24	Cum HB6	6-4⅞x6	672	17.	427	125-1800	7-4½x16½	Y	BL 7341	4	Tim 59000	SF	R	6.04-9.55	Tim 36000	Ws4rIA	636	948	a	TD	134	7½x3¼x¼	C
81	....(D) 512	4R	......	(23)	205	235	38000	13500	9.00/20D	9.75/20	Cum HB6	6-4⅞x6	672	17.	427	125-1800	7-4½x16½	Y	BL 7311	4	Tim SW251	SF	A	5.00-9.25	Tim 36000	Ws4rIA	568	867	a	TD	116⅝	7½x3¼x¼	C
82	513	6	......	(23)	200	224	28000	11500	9.00/20D	9.00/20	Her JXDM	6-4x4¼	320	5.9	224	95-2800	7-2½x10 11/16	Y	BL 3341	4	Tim SD151H	2F	A	** -7.21	Wis F209H	L6IH	618	1056	a	TD	116⅝	7½x3¼x¼	C
83	....(D) 514	6	......	(23)	200	224	28000	13000	9.00/20D	9.00/20	Cum HB4	4-4⅞x6	448	17.	287	83-1800	5-4½x11½	Y	BL 5341	4	Tim SD151H	2F	A	** -7.21	Wis F209H	L6IH	618	1056	a	TD	127	7½x3¼x¼	C
84	....(D) 520	2F	......	(23)	214	239	36300	12200	9.00/20D	10.50/20	Cum HB6	6-4⅞x6	672	17.	427	125-1800	7-4½x16½	Y	BL 7341	4	Tim 75736	2F	H	6.85-9.41	Tim 35100	Ws4rIA	636	948	a	TD	127	7½x3¼x¼	C
85	....(D) 522	2F	......	(23)	214	239	45000	12150	9.00/20D	10.50/22	Cum HB6	6-4⅞x6	672	17.	427	125-1800	7-4½x16½	Y	BL 7311	4	Tim 76736	2F	H	6.02-9.2	Tim 36000	Ws4rIA	636	948	a	TD	127	7½x3¼x¼	C
86	....(D) 523	4R	......	(23)	214	239	42000	13700	9.00/20D	10.50/24	Cum HB6	6-4⅞x6	672	17.	427	125-1800	7-4½x16½	Y	BL 7341	4	Tim SW352	WF	A	6.00-8.5	Tim 36000	Ws4rIA	800	1190	a	TD	127	7½x3¼x¼	C
87	....(D) 524	4R	......	(23)	214	239	54000	14700	9.75/20D	10.50/24	Cum HB6	6-4⅞x6	672	17.	427	125-1800	7-4½x16½	Y	BL 7341	4	SW452	WF	A	6.00-8.2	Tim 36000	Ws4rIA	800	1190	a	TD	127	7½x3¼x¼	C
88	527	4R	......	(23)	204	234	35000	11000	9.00/20D	9.75/20	Bud LO525	6-4½x5½	525	5.5	385	135-2200	7-3x11½	Y	Fu 5A-620	5	Tim SW-252	WF	A	6.10-8.30	Tim 35100	L4IHV	668	1192	a	TD	120	7½x3¼x¼	C
89	528	4R	......	(23)	211	236	39000	9700	9.75/20D	10.50/24	Bud LO525	6-4½x5½	525	5.5	385	135-2200	7-3x11½	Y	Fu 5A-620	5	Tim SW-352	WF	A	6.40-8.20	Tim 35100	Ws4rIA	800	1190	a	TD	127	7½x3¼x¼	C
90	LeMoon407SW75	4R	2-5	2700	144	Op	.....	6500	6.50/20D	32x6	Wau 6BK	6-3¾x4¼	282	5.2	190	85-3200	7-2⅝x10¼	N	BL 2341	4	Tim SW75	WF	H	6.2-7.4	Tim 30000H	L6IHV	532	887	A	TX	Opt	8x3½x¼T	
91	507-SBD 1000	4R	4-8	3500	187	199	.....	8000	32x6D	8.25/20	Wau 6MK	6-4⅛x4¾	381	6.5	254	85-2400	7-2⅝x12½	N	Cla 270V	4	Tim SBD1000	WF	H	7.11-8.30	Tim 32502H	L6IHV	593	1094	A	TD	Opt	9x4x¼	Tf
92	806	4R	5-10	4900	187	199	.....	9720	9.00/20D	9.75/20	Wau 6SRL	6-4⅜x5⅛	462	4.5	300	102-2400	7-3x13⅞	Y	BL 5341	4	Tim SW251	WF	H	6.2-9.1	Tim 35000H	L6IHV	633	1100	A	CD	Opt	9x4x¼	Tf
93	907	4R	7-8	7950	191	203	.....	12000	9.75/20D	40x8	Wau 6-125	6-4⅜x5⅛	462	5.2	330	125-2500	7-3x13⅞	Y	BL 5351	5	TimSW310W	WF	H	7.25-9.25	Tim 35000tw	Ws4IA	966	1517	c	CD	108	9x4x¼	B
94	1200	4R	10-12	8500	196	208	.....	14000	9.75/20D	40x8	Wau 6RB	6-5x5¾	677	4.6	460	127-2000	4-3½x11¾	Y	BL 7351	5	TimSW410W	WF	H	7.6-9.5	Tim 26050W	Ws4IA	966	1517	c	CD	108	9x4x5/16	B
95	.....1200D	4R	10-12	9750	196	208	.....	14000	9.75/20D	40x8	Cum.Die.H6	6-4⅞x6	672	17.1	420	125-1800	7-3¼x16½	Y	BL 7351	5	TimSW410W	WF	H	7.6-9.5	Tim 26050W	Ws6IA	966	1517	c	CD	108	9x4x5/16	B
96	Mack.....BX	2F	......	7000	196	221	.....	13050	8.25/22D	9.75/24	Own CF	6-4¼x5½	468	5.0	310	118-2400	7-3x12 3/16	Y	Own CF	5	Own BX	2F	A	6.46-9.05	Own BX	O6IA	974	1518	a	FX	125	9½x3x¼	T
97	.........BX	4R	......	7500	194	219	.....	14050	8.25/22D	9.75/24	Own CF	6-4¼x5½	468	5.0	310	118-2400	7-3x12 3/16	Y	Own CF	5	Own BX6	2F	A	6.54-10.0	Own BX	O6IA	974	1518	a	FX	125	9½x3x¼	T
98	(e.b.s.)...CJ	2F	......	7850	149	188	.....	13100	8.25/22D	9.75/24	Own CF	6-4¼x5½	468	5.0	310	118-2400	7-3x12 3/16	Y	Own CF	5	Own BX	2F	A	6.46-9.05	Own CJ	O6IA	974	1518	a	FX	123	9½x3x¼	T
99	(e.b.s.)...CJ	4R	......	8350	147	186	.....	13950	8.25/22D	9.75/24	Own CF	6-4¼x5½	468	5.0	310	118-2400	7-3x12 3/16	Y	Own CF	5	Own BX6	2F	A	6.54-10.0	Own CJ	O6IA	974	1518	a	FX	123	9½x3x¼	T
100	.........BQ	2F	......	8850	199	235	.....	15150	9.75/22D	9.75/24	Own BQ	6-4¾x5¾	611	4.8	390	125-2200	4-3½x10 7/16	Y	Own AK	4	Own AK	2F	A	7.43-10.0	Own BQ	O6IA	1065	1626	a	FX	123	10½x3x¼	T
101	.........BQ	4R	......	9350	197	233	.....	15550	9.75/22D	9.75/24	Own BQ	6-4¾x5¾	611	4.8	390	125-2200	4-3½x10 7/16	Y	Own AK	4	Own BX6	2F	A	6.54-10.0	Own BQ	O6IA	1065	1626	a	FX	123	10½x3x¼	T
♦102	Marmon.....E5-6		3-6	2425	154	154	.....	5821	6.00/20D	32x6	Ford V8	8-3 1/16x3¾	221	6.12	146	85-3800	3-2.4x5⅜	N	Ford	4	Tim	SF	R	** 6.67	Own IX41	6IH	496	629	a	2/6I	80½	7½x2¾x 5/32	TL
♦103	Herrington..E6-6		3-6	2475	179	179	.....	5925	6.00/20D	32x6	Ford V8	8-3 1/16x3¾	221	6.12	146	85-3800	3-2.4x5⅜	N	Ford	4	Tim	SF	R	** 6.67	Own IX41	6IH	496	629	a	2/6I	105½	7½x2¾x 5/32	TL
104	..........C20-6		5-6	3995	167	Op	.....	7800	7.00/20D	7.00/20	Her JXC	6-3¾x4¼	282	5.3	196	84-2800	7-2½x10 31/32	N	Fu 5A33	5	Wis MH922	2F	R	7.36	WH MH92	6IH	549	930	a	TX	84	7⅞x2½x 7/32	P
105	..........C30-6		6-8	4795	167	Op	.....	8400	7.00/20D	8.25/20	Her JXD	6-4x4¼	320	5.3	224	95-2800	7-2½x10 31/32	N	Fu 5A33	5	Wis MH933	2F	R	7.66	WH MH93	6IH	600	1055	a	TX	84	7⅞x2½x 7/32	P
106	..........C50-6		7-9	7135	158	Op	.....	10000	8.25/22D	9.00/20	Her WXLC3	6-4¼x4¾	404	5.0	293	118-2800	7-2⅝x13¼	Y	Fu 5A430	5	Wis MH955	2F	R	9.33	WH MH95	6IA	726	1300	a	FD	72	9 11/16x3x¼	P
107	..........C60-6		8-10	8500	173	Op	.....	11700	9.00/20D	9.00/20	Her RXB	6-4½x5¼	501	4.5	330	110-2200	7-3x14	Y	Fu 5A620	5	Wis MH955	2F	R	8.44	WH MH95	6IA	726	1300	a	FD	84	9 11/16x3x¼	P
108	..........C80-6		10-12	11920	173	Op	.....	13690	9.75/20D	9.75/22	Her RXC	6-4⅝x5¼	529	4.9	350	114-2200	7-3x14	Y	Fu 5A620	5	Wis MH966	2F	R	** 8.15	WH MH96	6IA	1056	1626	a	FD	84	10 1/16x3 5/16	P
109	.......TH515-6		14-17	14000	192	Op	.....	16800	9.75/20D	9.75/22	Her HXD	6-5½x6	855	4.5	555	180-200	7-3½x17	Y	BL 7341	4	Wis MH966	2F	R	** 9.11	WH MH96	6IA	1056	1626	a	FD	96	8⅛x3x 5/16	P
110	.......TH520-6		17-20	16000	198	Op	.....	19000	10.50/20D	10.50/24	Her HXE	6-5¾x6	935	4.5	610	198-2000	7-3½x17	Y	BL 7341	4	Wis MH977	2F	R	** 9.11	WH MH97	6IA	1056	1626	a	FD	102	10⅛x3x⅜	P
111	(D).....CD20-6		5-6	5270	167	Op	.....	8750	7.00/20D	7.00/20	Her DJXB	6-3½x4½	260	...	178	79-2600	7-3x10 1/32	Y	Fu 5A33	5	Wis MH922	2F	R	6.66	WH MH92	6IH	549	930	a	TX	84	7⅞x2½x 7/32	P
112	(D).....CD30-6		6-8	6070	167	Op	.....	9410	7.50/20D	8.25/20	Her DJXC	6-3¾x4½	298	...	194	90-2600	7-3x10 1/32	Y	Fu 5A33	5	Wis MH933	2F	R	6.41	WH MH93	6IH	600	1055	a	TX	84	7⅞x2½x 7/32	P
113	(D).....CD55-6		7-9	9950	170	Op	.....	12000	9.00/20D	9.00/20	Her DRXB	6-4⅜x5¼	474	...	350	124-2200	7-3x13¼	Y	Fu 5A620	5	Wis MH955	2F	R	7.66	WH MH95	6IA	726	1300	a	FD	84	9 11/16x3x¼	P
114	(D).....CD80-6		10-12	14350	161	Op	.....	14615	9.75/20D	9.75/22	Her DRXB	6-4⅜x5¼	474	...	350	124-2200	7-3x13¼	Y	Fu 5A620	5	Wis MH966	2F	R	** 8.15	WH MH96	6IA	1056	1626	a	FD	84	10 1/16x3x 5/16	P
115	(D)...THD515-6		14-17	16650	192	Op	.....	17475	9.75/20D	9.75/22	Her DHXB	6-5x6	707	...	530	176-1800	7-3½x17¼	Y	BL 7341	4	Wis MH966	2F	R	** 8.15	WH MH96	6IA	1056	1626	a	FD	96	8⅛x3x 5/16	P
116	(D)...THD520-6		17-20	18400	198	Op	.....	19650	10.50/20D	10.50/24	Her DHXB	6-5x6	707	...	530	176-1800	7-3½x17¼	Y	BL 7341	4	Wis MH977	2F	R	** 8.15	WH MH97	6IA	1056	1626	a	FD	102	10⅛x3x⅜	P
	Moreland																																
117	(13d)HD400	4R	10	6490	220	...	40000	11614	9.75/20D	9.75/20	Her RXB	6-4½x5¼	501	4.7	330	110-2200	7-3x13¼	N	BL 5241	4	T&M 2-65700	WF	H	** 7.75	Ti 26450TW	T61A	909	1409	a	CD	135	9 1/16x3 5/16x 5/16	T
118	(13e) TD420	4R	10	8498	224	...	42000	14114	9.75/20D	9.75/20	Her HXB	6-5x6	707	4.5	460	148-2000	7-3½x16⅝	N	BL 7311	4	T&M 2-66720	WF	H	** 8.15	Ti 27450TW	T6IA	909	1409	a	CD	133	11x3 5/16x 5/16	T
119	Ster-FBT152 2C	2F	8-10	4105	177	207	32000	9475	9.00/20D	9.75/20	Wau 6MZ	6-4¼x4¾	404	5.7	267	89-2400	7-2⅝x12½	Y	Own U25	5	TimSBT251H	SF	R	5.57-7.80	Tim 35000N	L4rIHV	584	1024	a	TX	91	10x3¼x¼	L
120	ling..FWS152	4R	8-10	4560	177	207	32000	9850	9.00/20D	9.75/20	Wau 6MZ	6-4¼x4¾	404	5.7	267	89-2400	7-2⅝x12½	Y	Own UC25	5	Tim SW251H	WF	R	6.20-9.25	Tim 35000N	L4rIHV	584	1024	a	TX	91	10x3¼x¼	L
121	(16) FDS180	4R	10-12	8490	181	211	40000	13500	9.75/20D	10.50/22	Wau 6-125	6-4⅜x5⅛	462	5.0	328	125-2400	7-3x13⅞	Y	Own UC2	4	Tim SD352W	2F	R	7.33-10.3	Tim 26450N	Ws4rIA	800	1352	A	TX	93	9x3¼x¼	L
122	(16) HCS210	4R	12-18	11595	185	201	55000	14685	40x8D	10.50/24	Wau 6RB	6-5x5¾	677	5.3	470	145-2000	4-3½x11⅜	Y	Own UC9	4	Own SR210W	CD	R	9.98-13.25	Tim 27452N	Ws4rIA	792	1464	s	FX	95	9¼x3¼x⅜	L
♦123	White.....904	4R	......	3185	160	214	.....	7260	7.00/20D	8.25/20	Own 270	6-3 5/16x4½	270	5.5	195	83-2800	7-2⅞x10.7	Y	Own 28B	4	Tim SBD 1000	2F	R	5.93-8.30	Own 22D	L6IHV	514	843	a	TX	84¼	7x2 21/32x¼	TF
♦124	918	4R	......	4995	154	208	.....	9390	9.00/20D	9.75/22	Own 318	6-3⅞x4½	318	5.5	234	94-2600	7-2⅞x10.7	Y	Own 54B	5	Tim SDD252	2F	R	7.0-8.4	Own 16D	L6IHV	718	1224	a	TX	84	8x3x¼	P
♦125	920	4R	......	7550	158	235	.....	12230	9.00/20D	10.50/22	Own 460	6-4 5/16x5¼	460	5.0	320	123-2400	7-2¾x13⅛	Y	Own 36B	5	Tim SDD352	2F	R	7.33-9.11	Own 24D	O6IA	798	1224	a	TD	84	8⅛x3 1/16x 5/16	P
♦126	922	4R	......	9350	158	235	.....	13575	9.75/20D	11.25/22	Own 529	6-4⅝x5¼	529	5.0	365	130-2400	7-2¾x13⅛	Y	Own 36B	5	Tim SDD452	2F	R	8.15-10.2	Own 9D	O6IA	1079	1503	a	TD	84	8¼x3⅛x⅝	P
127	942	4R	......	9800	172	245	.....	15570	10.50/20D	10.50/24	Own 580	6-4⅝x5¾	580	4.6	385	130-2300	7-3x15 11/32	Y	Own 10B	5	Tim SDD452	2F	R	8.15-10.2	Own 9D	O6IA	1079	1503	a	CI	84⅜	8⅛x3 1/16x 5/16	C
128	991	4R	......	10900	149	245	.....	15825	10.50/24D	11.25/24	Own 580	6-4⅝x5¾	580	4.6	385	130-2300	7-3x15 11/32	Y	Own 10BB	5	Tim SDD452	2F	R	8.15-10.2	Own 13D	O6IA	1079	1503	a	CI	84½	8¼x3¾x⅜	C

Electrics

129	Brockway....50-E	1-1½	1308	91	Op	.....	2450	32x6S	32x6	GE Elec	....				....			....		Tim 53200H	SF	H	....	Tim 30000H	L4IH	265	402	a	CD	.....	5x6	CD
130	.........50-E-1	1	1500	91	112	.....	2850	30x5S	32x6	GE Elec	....				....			....		Tim 53200H	SF	H	....	Tim 30000H	L4IH	265	402	a	CD		5x6	CD
131	.........125-E	2-3	2400	136	Op	.....	4800	8.25/20D	9.00/20	GE Elec	....				....			....		Tim 54300H	2F	H	....	Tim 31000H	L4IH	329	580	a	CD	100½	7½x2½x¼	C
132	.........140-E	3-4	3200	146	Op	.....	5500	9.20/20D	9.75/20	West Elec	....				....			....		Wis 5000L	2F	H	....	Shu 15685B1	L4IH	329	580	a	CD	112½	7½x3x¼	C
133	.........170-E	5-6	3650	148	Op	.....	6700	9.75/20D	10.50/20	West Elec	....				....			....		Wis 72000L	2F	H	....	Shu 15685B1	L4IH	396	663	a	CD	112½	8x3x¼	C
134	.........195-E	6-7	4200	160	Op	.....	8040	9.75/20D	10.50/20	West Elec	....				....			....		Wis 1337BH	2F	H	....	Shu 15685B1	L4IH	484	772	a	CD	124½	8¼x3x⅜	C
135	Walker(17).400-LA	1-1½	1380	95	Op	.....	2350	32x6S	....	Own Elec.	....				....			....		Own	F	H	....	Cla	B4IH	214	308	a	4I	36	4x2x 3/16	CD
136	405	1	1450	116	Op	.....	2800	32x6S	....	Own Elec.	....				....			....		Own	F	H	....	Cla	B4IH	214	308	a	4I	75	4x2x 3/16	C
137	.........405-LA	1	1525	116	Op	.....	2600	32x6S	....	Own Elec.	....				....			....		Own	F	H	....	Cla	B4IH	214	308	a	4I	67	4x2x 3/16	CD
138	420	1½-2	1800	116	Op	.....	3600	32x6D	....	Own Elec.	....				....			....		Own	F	H	....	Cla	B4IH	242	344	a	4I	74	5x2x¼	P
139	425	2½	2400	126	Op	.....	4700	32x6D	....	Own Elec.	....				....			....		Own	2F	H	....	Tim	B4IM	396	571	a	4I	90	5x2x¼	P
140	430	3	2500	126	Op	.....	5300	34x7D	....	Own Elec.	....				....			....		Own	2F	H	....	Tim	B4IM	396	571	a	4I	90	5x2x¼	P
141	440	4	3400	145	Op	.....	6300	36x8D	....	Own Elec.	....				....			....		Own	2F	H	....	Tim	B4IM	470	678	a	4I	109	6x2x¼	P
142	450	5-6	3650	160	Op	.....	7000	38x9D	....	Own Elec.	....				....			....		Own	2F	H	....	Tim	B4IM	470	678	a	4I	124	7x3x¼	P
143	480	6-7	5650	162	162	.....	7600	10.50/20D	....	Own Elec.	....				....			....		Own	2F	H	....	Tim	B4IM	520	748	a	4I	136	7x3x¼	P

♦ Denotes New Models or Change in Specifications.

For abbreviations see page 269

AMERICAN GASOLINE

Line Number	MAKE AND MODEL	GENERAL: Passenger Rating	Type (City Service, Parlor, etc.)	Standard Wheelbase (In.)	Overall Length (In.)	Tread—Front and Rear (In.)	Complete Vehicle Weight (Lb.)	Standard Tire Sizes (In.): Front	Standard Tire Sizes (In.): Rear	Maximum Permissible Load on Tires (Lb.): Front	Maximum Permissible Load on Tires (Lb.): Rear	ENGINE: Make and Model	Location	Number of Cylinders Bore and Stroke (In.)	Displacement (Cu. In.)	Rated Horsepower (A.M.A.)	Maximum Brake Hp. at Specified R.P.M.	Maximum Net Torque Lb. Ft. at R.P.M.	Valve Arrangement	Oiling System: Oil Pressure To	Fuel System: Carburetor Make and Type	Fuel System: Carburetor Size (In.)	Fuel System: Gasoline Tank Capacity (Gal.)
1	A. C. F. H-9S	42	CS	245½	395⅜	80⅜-72	16640	9.75/22	9.75/22d	8400	16800	HS 180	UF	6-5x6	707	60.0	180-2200	472-1000	I	acde	Zen.,Up	2	115
2	A. C. F. H-9P	.....	Par	245½	395⅜	80⅜-72	18200	10.50/22	10.50/22d	10000	20000	HS 180	UF	6-5x6	707	60.0	180-2200	472-1000	I	acde	Zen.,Up	2	135
3	A. C. F. H-13S	30	CS	158	323⅜	81¼-70¼	13000	9.75/20	9.00/20d	7800	13000	HS 130	UF	6-4¼x5	425	43.3	124-2800	290-1000	I	acde	Zen.,Up	1¾	72
4	A. C. F. H-15P	28	Par	188	328¾	81¼-70¼	14800	9.75/20	9.75/20d	7800	15600	HS 135	UF	6-4½x5	477	48.6	139-2800	324-1000	I	acde	Zen.,Up	1¾	85
5	A. C. F. H-15S	32	CS	188	324	81¼-70¼	13100	9.00/20	9.00/20d	6500	13000	HS 135	UF	6-4½x5	477	48.6	139-2800	324-1000	I	acde	Zen.,Up	1¾	72
6	A. C. F. H-16	42	CS	210⅜	394½	81¾-72	16400	10.50/20	9.75/20d	9200	15600	HS 180	UF	6-5x6	707	60.0	180-2200	472-1000	I	acde	Zen.,Up	2	90
7	A. C. F. H-17S	35	CS	183½	351⅝	81¼-70¼	13700	9.75/20	9.00/20d	7800	13000	HS 135	UF	6-4½x5	477	48.6	139-2800	324-1000	I	acde	Zen.,Up	1¾	72
8	Dittmar C	29-31	Par	205½	328½	81¼-81¼	10800	9.00/20	9.00/20d	6500	13000	Int ... FBB361	FE	6-4⅛x4½	361	40.8	111-2700	268-1500	I	abcd	Zen. Do	....	120
9	Dittmar .... B.T.	27-30	CS	170½	293½	81¼-81¼	7900	7.50/20	7.50/20d	4400	8800	Int ... FAB241	FE	6-3⅜x4½	241	27.3	84-3200	175-800	I	abcd	Zen. Do	....	40
10	Dittmar .... B.P.	25-27	Par	170½	293½	81¼-81¼	8150	7.50/20	7.50/20d	4400	8800	Int ... FAB241	FE	6-3⅜x4½	241	27.3	84-3200	175-800	I	abcd	Zen. Do	....	60
11	Fageol 1350	18-21	Chs	189¼	341	70⅛-75	11750	8.25/20	....	(1)	(1)	Wau 6BK	RC	6-3¾x4¼	282	33.8	82-2800	190-1000	L	acdf	Zen. Do	1¼	50
12	Fageol 2500	21-29	Chs	189¼	341	70⅛-75	12500	8.25/20	8.25/20d	(2)	(2)	Wau ... 6MK	RC	6-4⅛x4¾	381	40.8	85-2500	240-900	L	acd	Zen. Do	1¾	50
13	Fageol 3000	29-36	Chs	189¼	341	78 -75	15500	9.75/20	9.75/20d	(3)	(3)	HS 135	Ms	6-4½x5	477	48.6	130-2800	300-1200	I	abcdf	Zen. Do	1¾	50
14	Flxible 16-C-78	16-20	Par	206¾	305	58 1/16-73 17/32	.....	7.00/20	7.00/20d	.....	.....	Che 1938	FH	6-3½x3¾	216	29.4	78-3200	170-850	I	adf	Car..Do	1¼	38
15	Flxible 19-C-78	19-24	Par	206¾	341	58 1/16-73 17/32	.....	7.00/20	7.00/20d	.....	.....	Che 1938	FH	6-3½x3¾	216	29.4	78-3200	170-850	I	adf	Car..Do	1¼	38
16	Flxible 20-CL-78	20-25	Par	182½	334½	69½-73 17/32	.....	7.50/20	7.50/20d	.....	.....	Che 1938	FE	6-3½x3¾	216	29.4	78-3200	170-850	I	adf	Car..Do	1¼	38
17	Gar Wood ..... CTF	25	Par	200	331¼	57 . -65	6500	6.50/20	6.50/20d	.....	.....	Fo 85	R	8-3 1/16x3¾	221	30.0	85-3800	146-1900	L	acd	Fo.. Do	.97	50
18	Gar Wood ...... CIF	21	Par	200	331¼	57 -65	7000	6.50/20	6.50/20d	.....	.....	Fo 85	R	8-3 1/16x3¾	221	30.0	85-3800	146-1900	L	acd	Fo.. Do	.97	50
19	Mack .... CW	23	CS	165	292	80¼-73⅞	.....	7.50/20	7.50/20d	.....	.....	O .... CU	RT	6-3⅞x5	354	36.0	100-2800	237-1000	L	acdg	Str.. Up	1½	55
20	Mack .... CY	25-27	CS	182	301	80¼-73⅞	.....	7.50/20	7.50/20d	.....	.....	O .... CU	RT	6-3⅞x5	354	36.0	100-2800	237-1000	L	acdg	Str.. Do	1½	55
21	Mack .... CQ	31	CS	178	346	82 -73	.....	9.00/22	9.00/22d	.....	.....	O .... CT	RT	6-4½x5½	525	48.6	125-2300	350-1000	L	acdg	Str.. Up	1¾	80
22	Mack .... CT	35	CS	214	389	82 -73	.....	9.00/22	9.00/22d	.....	.....	O .... CT	RT	6-4½x5½	525	48.6	125-2300	350-1000	L	acdg	Str.. Up	1¾	80
23	Studebaker ... K15B	.....	AT	187	310¼	60¾-66⅛	9045	6.50/20	7.50/20d	3400	8800	O .... IT	FH	6-3 5/16x4⅜	226	26.3	85-3200	163-1200	L	acd	Car..Do	1¼	30
24	Studebaker. K20MB	.....	AT	187	310¼	68 3/16-65 5/32	10595	7.50/20	8.25/20d	4400	10600	Her ..... JXB	UD	6-3⅝x4¼	263	31.5	79-2800	178-1000	L	ac	Car..Do	1¼	30
25	Studebaker. K25MB	.....	AT	187	310¾	66 5/16-69¾	12570	7.50/20	9.00/20d	4400	13000	Her ..... JXD	UD	6-4x4¼	320	38.4	86-2600	216-1000	L	ac	Car..Do	1¼	30
26	Twin Coach 23R	23	CP	178	284⅝	82⅛-73⅛	9200	8.25/18	8.25/18d	2450	2450	Her.. JXDTR	R	6-4x4¼	320	38.4	92-2400	225-1000	L	abcdg	Zen.,Up	1¼	50
27	Twin Coach ..... GU	25	CS	178	284⅝	82⅛-73⅛	9500	8.25/18	8.25/18d	2450	2450	Her... QXC-3	R	6-3⅜x4⅛	221	27.3	75-3500	154-1000	L	abcdg	Zen. Do	1¼	50
28	Twin Coach 30R	30	CP	235	342⅛	84¾-74⅝	11000	9.00/18	8.25/20d	2900	5300	Her., WXLRT	R	6-4¼x4¾	404	43.3	120-2400	300-1100	L	abcdg	Zen.,Up	1½	65
29	Twin Coach 35R	35	CP	195	367	82¾-72¾	14410	9.75/20	9.75/20d	4400	7800	Her.. RXLCT	R	6-4⅝x5¼	529	51.3	126-2400	377-1100	L	abcdg	Zen. Do	1¾	90
30	Twin Coach 31R	31	CP	179 17/32	335	81¾-74⅝	12300	8.25/20	8.25/20d	2650	5300	Her., WXLRT	R	6-4¼x4¾	404	43.3	120-2400	300-1100	L	abcdg	Zen.,Up	1½	80
31	Twin Coach ... 40RC	40	CP	227	395	82¾-72¾	.....	9.75/20	9.75/20d	2650	5300	Her.. RXLCT	R	6-4⅝x5¼	529	51.3	126-2400	377-1100	L	abcdg	Zen. Do	1¾	90
32	Yellow Tr. & Ch. 742	36	Par	233½	396	78¼-78¾	19780	10.50/20	10.50/20d	9400	18800	G.M.T. ... 707	R	6-5x6	707	60.0	173-2100	550-1000	I	abcf	Str.. Do	2	155
33	Yellow Tr. & Ch. 740	40	CS	233½	396	78¼-71¾	17545	10.50/20	10.50/20d	9400	18800	G.M.T. ... 707	R	6-5x6	707	60.0	173-2100	550-1000	I	abcf	Str.. Do	2	100
34	Yellow Tr. & Ch. 739	25	CS	171	298½	82½-76	10118	8.25/18	8.25/18d	4900	9800	G.M.T. ... 400	R	6-4⅛x5	400	40.9	112-2500	292-(4)	I	abcf	Zen. Do	1½	60
35	Yellow Tr. & Ch. 738	20	Par	171	298½	82½-76	11061	8.25/18	8.25/18d	4900	9800	G.M.T. ... 400	R	6-4⅛x5	400	40.9	112-2500	292-(4)	I	abcf	Zen. Do	1½	90
36	Yellow Tr. & Ch. 733	21	CS	160	282	69⅛-65	6530	7.50/18	7.50/18d	4050	8100	G.M.T. ... 216	FH	6-3½x3¾	216	29.4	78-3200	170-(5)	I	acf	Car..Do	1¼	35
37	Yellow Tr. & Ch. 732	31	Par	219	380½	80½-71	18600	10.50/20	10.50/20d	9400	18800	G.M.T. ... 707	R	6-5x6	707	60.0	173-2100	550-1000	I	acf	Str.. Do	2	145
38	Yellow Tr. & Ch. 731	36	CS	214	379½	81¾-73½	16236	9.75/20	9.75/20d	7800	15600	G.M.T. ... 529	R	6-4⅝x5¼	529	51.4	158-2400	405-1000	I	abcdf	Zen. Do	2	85
39	Yellow Tr. & Ch. 728	32	CS	184	348	81¾-73½	15244	9.00/20	9.00/20d	6500	13000	G.M.T. ... 479	R	6-4⅝x4¾	479	51.4	141-2400	360-1000	I	abcdf	Zen. Do	2	85

ABBREVIATIONS

(1)—Maximum gross capacity, front and rear 18,500 lbs.
(2)—Maximum gross capacity, front and rear 23,000 lbs.
(3)—Maximum gross capacity, front and rear 29,000 lbs.
(4)—800-1400 R.P.M.
(5)—800-1550 R.P.M.
a—Main Bearings
A—Air Pressure
AT—All Types
b—Wrist Pins
B—Borg & Beck Div.
Bd—Budd Wheel Co.
c—Connecting Rods
Car—Carter Carburetor Corp.
Ce—Centrifugal
Che—Chevrolet Motor Div.
Chs—Chassis Only
Cla—Clark Equipment
CP—City Service or Parlor
Cle—Cleveland Steel Products Corp.
CS—City Service Coach
d—Camshaft
d—Dual (Tires)
D—Disc Type (Hand Brake)
Del—Delco Products Div.
Dn—Dayton Steel Foundry Co.
Do—Downdraft
DP—Double Plate, Dry
DR—Delco-Remy Div.
Ds—Drive Shaft
e—Accessory Drive
EA—Electric Auto-Lite Co.
Ex—External
Exi—Exide (Electric Storage Battery Co.)
f—Valve Lifters

Passenger Car Chassis and Engine Trends

(Based on Units Sold)

	No. of Units Sold*	Gross Shipping Wgt. of Cars Sold (lb.)†	Gross Max. Hp. of Cars Sold‡	Average Weight (lb.)	Average Hp.
1930	2,625,979	7,320,000,000	142,800,000	2,780	54
1931	1,908,141	5,380,000,000	109,200,000	2,820	57
1932	1,096,399	3,200,000,000	75,400,000	2,920	69
1933	1,493,794	4,220,000,000	106,000,000	2,820	71
1934	1,888,557	5,560,000,000	156,000,000	2,940	83
1935	2,743,908	8,120,000,000	234,000,000	2,960	85
1936	3,404,497	10,190,000,000	291,000,000	3,000	86
1937	3,480,253	10,460,000,000	303,600,000	3,005	87

† Shipping weight of 5-passenger, 4-door sedan, taken as typical.
‡ Maximum horsepower taken from previous Statistical Issues.
* R. L. Polk & Co., registrations of new passenger cars, except for Wisconsin for last six months of 1937 which are estimated.

MOTORBUS CHASSIS

Electrical System: Ignition System (Make)	Electrical System: Generator and Starter (Make)	Electrical System: Battery: Make	Electrical System: Battery: Voltage Amp. Hours Capacity	Governor: Type	Governor: Maximum Governed Speed (M.P.H.)	Governor: Integral with Engine	Clutch—Make and Type	Transmission: Make	Transmission: No. of Forward Speeds	Transmission: Low Speed Gear Reduction	Transmission: Universal Joints Number and Make	Rear Axle: Make and Model	Rear Axle: Ratio: Standard	Rear Axle: Ratio: Optional	Brakes: Service: Type and Location	Brakes: Service: Operation	Brakes: Service: Lining Area (Sq. In.)	Brakes: Hand: Type and Location	Brakes: Hand: Lining Area (Sq. In.)	Springs: Front: No. of Leaves	Springs: Front: Length and Width (In.)	Springs: Rear: No. of Leaves	Springs: Rear: Length and Width (In.)	Running Gear: Front Axle—Make	Running Gear: Steering Gear—Make	Running Gear: Outside Diam. of Min. Turning Circle (Ft.)	Running Gear: Wheels—Make	Line Number
DR	DR	Exi	12-158	Ce	52	N	Lg...SP	Spi	4	4.36	2-Spi	Tim.....59023	5.12	4.56	I-Fw	A	795	Ex-Ds	220	14	54-3½	12	64-5	Tim	R	41	Bd	1
DR	DR	Exi	12-158	Ce	60	N	Lg...SP	Spi	4	4.36	2-Spi	Tim.....59023	4.56	5.12	I-Fw	A	795	Ex-Ds	220	14	54-3½	13	64-5	Tim	R	41	Bd	2
DR	DR	Exi	12-158	Ce	53	N	Spi...SP	Spi	3	4.04	2-Spi	Tim.....58258	5.57	5.12	I-Fw	A	623	Ex-Ds	160	13	56-3½	16	60-3½	Tim	R	27½	Dn	3
DR	DR	Exi	12-158	Ce	66	N	Spi...SP	Spi	4	4.76	2-Spi	Tim.....58258	4.56	5.12	I-Fw	A	623	Ex-Ds	160	14	56-3½	15	60-4	Tim	R	30	Bd	4
DR	DR	Exi	12-158	Ce	53	N	Spi...SP	Spi	3	4.04	2-Spi	Tim.....58258	5.57	5.12	I-Fw	A	623	Ex-Ds	160	14	56-3½	15	60-4	Tim	R	30	Dn	5
DR	DR	Exi	12-158	Ce	45	N	Lg...DP	Spi	3	3.80	2-Spi	Tim.....59023	5.62	....	I-Fw	A	824	Ex-Ds	220	13	61-4	11	65-5	Tim	R	36	Dn	6
DR	DR	Exi	12-158	Ce	53	N	Spi...SP	Spi	3	4.04	2-Spi	Tim.....58258	5.57	5.12	I-Fw	A	623	Ex-Ds	160	14	56-3½	13	60-4	Tim	R	29½	Dn	7
DR	DR	Wil	12-140	....	65	....	Int...SP	Int	5	6.52	4-Spi	Tim....56411w	4.44	5.29	I-Fw	A	500	Ex-Ds	62	11	52-3	11	52-3	Tim	R	43	Bd	8
DR	DR	Wil	12-140	....	50	....	Int...SP	Int	4	5.90	4-Spi	Tim.56542-HX2	5.67	4.57	I-Fw	H	306	D-Ds	62	11	52-3	11	60-3	Tim	R	34	Bd	9
DR	DR	Wil	12-140	....	65	....	Int...SP	Int	4	5.90	4-Spi	Tim.56542-HX2	5.67	4.57	I-Fw	H	306	D-Ds	62	11	52-3	11	60-3	Tim	R	34	Bd	10
DR	DR	Exi	6-127	Ce	52	Y	Lg...SP	WG	4	6.40	2-Spi	Tim...54200-H	5.83	....	I-Fw	H	306	Ex-	61	9	43-3½	13	60-3½	Tim	R	36½	Bd	11
DR	DR	Exi	6-127	Ce	44	Y	Spi...SP	Spi	3	4.03	2-Spi	Tim...56200-H	6.17	....	I-Fw	H	355	Ex-	45	13	60-3½	16	60-3½	Tim	R	36½	Bd	12
DR	DR	Exi	6-127	Cê	43	Y	Spi...SP	Spi	4	6.63	2-Spi	Tim..58200TW	7.80	....	I-Fw	A	504	Ex-Ds	45	8	60-3½	12	60-3½	Tim	R	36½	Bd	13
DR	DR	Del	6-95	Np	....	....	Che..SP	Che	4	7.23	3-Che	Che.......1938	5.43	4.75	I-Fw	H	331	I-Rw	....	....	36-1¾	....	54-2½	Che	....	68	....	14
DR	DR	Del	6-95	Np	....	....	Che..SP	Che	4	7.23	3-Che	Che.......1938	5.43	4.75	I-Fw	H	331	I-Rw	....	....	36-1¾	....	54-2½	Che	....	68	....	15
DR	DR	Del	6-95	Np	....	....	Che..SP	Che	4	7.23	3-Che	Che.......1938	5.43	4.75	I-Fw	A	331	I-Rw	....	....	52-2½	....	54-2½	Tim	R	60	....	16
Fo	Fo	Wil	12-133	Np	....	....	Fo...SP	Fo	3	3.71	1-Spi	Fo.......Truck	6.60	....	I-Fw	M	350	I-Rw	121	13	39-2¼	10	62-2½	Fo	R	71	Bd	17
Fo	Fo	Wil	12-133	Np	....	....	Fo...SP	Fo	3	3.71	1-Spi	Fo.......Truck	5.14	....	I-Fw	M	350	I-Rw	121	13	39-2¼	10	62-2½	Fo	R	71	Bd	18
DR	DR	Exi	12-158	Su	45	N	O....SP	O	3	4.16	2-Cle	O..........CW	4.90	4.45	I-Fw	A	437	Ex-Ds	82	9	52-3	11	52-3	O	O	50	O	19
DR	DR	Exi	12-158	Su	45	N	O....SP	O	3	4.16	2-Cle	O..........CW	4.90	4.45	I-Fw	A	437	Ex-Ds	82	9	52-3	11	52-3	O	O	55½	O	20
DR	DR	Exi	12-158	Ce	49	N	O....SP	O	3	3.79	2-Cle	O..........CQ	5.86	5.43	I-Fw	A	635	Ex-Ds	86	....	60-3½	....	60-4	O	O	63⅔	O	21
DR	DR	Exi	12-158	Ce	49	N	O....SP	O	3	3.79	2-Cle	O..........CQ	5.86	5.43	I-Fw	A	635	Ex-Ds	86	....	60-3½	....	60-4	O	O	76½	O	22
EA	EA	Wil	6-105	Su	43	Y	B....SP	WG	4	6.40	3-Cle	Cla......R-751	5.57	5.12	I-Fw	H	271	Ex-Ds	49	9	36-2	14	56-3	Cla	R	77⅓	Bd	23
DR	DR	Wil	6-136	Su	62	Y	B....SP	WG	4	6.40	3-Cle	Tim.....54414	6.80	4.85	I-Fw	H	320	Ex-Ds	49	9	39-2½	15	56-3	Tim	R	55	Bd	24
DR	DR	Wil	6-136	Su	47	Y	WL..SP	Cla	5	7.58	3-Cle	Tim.....56411	6.83	6.16	I-Fw	H	418	Ex-Ds	274	10	39-2½	15	56-3	Tim	R	55	Bd	25
DR	DR	Exi	12-117	Su	45	Y	Spi...SP	Spi	3	4.04	1-Spi	Tim...53537A-1	5.67	5.14	I-Fw	A	384	D-Ds	....	12	46-3	14	60-3	Tim	R	30⅚	Bd	26
DR	DR	Exi	12-117	Su	50	....	Spi...SP	Spi	3	4.55	1-Spi	Tim...53537A-1	5.67	5.14	I-Fw	A	384	D-Ds	....	12	46-3	14	60-3	Tim	R	30⅚	Bd	27
DR	DR	Exi	12-134	Su	50	Y	Spi...SP	Spi	3	4.04	1-Spi	Tim.....56215	5.29	6.17	I-Fw	A	576	D-Ds	....	13	46-3	15	60-3	Tim	R	39½	Bd	28
DR	DR	Exi	17-134	Su	52	Y	Spi...SP	Spi	3	4.01	2-Spi	Tim.....58266	5.57	4.56	I-Fw	A	720	D-Ds	....	13	60-4	14	60-4	Tim	R	35½	Bd	29
DR	DR	Exi	12-134	Su	50	Y	Spi...SP	Spi	3	4.01	2-Spi	Tim.....56216	5.71	6.17	I-Fw	A	576	D-Ds	....	10	60-4	12	60-4	Tim	R	36½	Bd	30
DR	DR	Exi	17-134	Su	52	Y	Spi...SP	Spi	3	4.01	2-Spi	Tim.....58266	5.57	4.56	I-Fw	A	720	D-Ds	....	13	60-4	14	60-4	Tim	R	35½	Bd	31
DR	DR	Exi	12-95	Ce	....	Y	Lg...SP	Spi	4	4.36	2-Spi	Tim..........	3.58	4.91	I-Fw	A	812	Ex-	126	11	58-4	16	62-4	Tim	S	87	MW	32
DR	DR	Exi	12-95	Ce	....	Y	Lg...SP	Spi	3	3.32	2-Spi	Tim..........	4.91	3.58	I-Fw	A	913	Ex-Ds	126	11	58-4	16	62-4	Tim	S	87	MW	33
DR	DR	Exi	12-111	Su	....	....	Lg...SP	Spi	3	3.55	2-Spi	Tim..........	5.14	....	I-Fw	A	464	Ex-Ds	105	8	56-3	11	56-3½	Tim	S	64½	MW	34
DR	DR	Exi	12-111	Su	....	....	Lg...SP	Spi	3	3.55	2-Spi	Tim..........	3.89	5.14	I-Fw	A	464	Ex-Ds	105	9	56-3½	11	56-3½	Tim	S	64½	MW	35
DR	DR	Pre	12-95	....	....	....	O....SP	O	4	7.23	3-Spi	Tim..........	6.20	5.67	I-Fw	H	438	I-Rw	219	10	44-2½	10	54-2½	Tim	S	57	MW	36
DR	DR	Exi	12-95	Ce	....	....	Lg...SP	Spi	4	4.36	2-Spi	Tim..........	4.91	3.58	I-Fw	A	812	Ex-Ds	126	10	58-4	17	62-4	Tim	S	74	MW	37
DR	DR	Exi	12-126	Ce	....	Y	Lg...SP	Spi	3	3.32	2-Spi	Tim..........	5.86	....	I-Fw	A	703	Ex-Ds	100	10	59-3	13	58-4	Tim	R	77	MW	38
DR	DR	Exi	12-126	Ce	....	Y	Lg...SP	Spi	3	3.32	2-Spi	Tim..........	5.86	....	I-Fw	A	703	Ex-Ds	100	10	59-3	12	58-4	Tim	S	68	MW	39

FE—Front End, under Body
FH—Front End, under Hood
Fo—Ford Motor Co.
Fw—Four Wheels
g—Timing Gears
G.M.T.—General Motors Truck & Coach Mfg. Co.
H—Hydraulic
Her—Hercules Motors Corp.
HS—Hall-Scott Motor Car Co.
I—In-Head (Valves)
I—Internal (Brakes)
Int—International Harvester
L—At Side (Head)
Lg—Long Mfg. Div.
M—Mechanical
Ms—Midship
MW—Motor Wheel Corp.
N—No or None
Np—No provision
O—Own
Par—Parlor Coach
Pre—Prest-O-Lite Storage Battery Corp.
R—Ross Gear & Tool Co.
R—Rear (Engine Location)
RC—Rear of Coach
RT—Rear, Transverse
Rw—Rear Wheels
S—Saginaw Steering Gear Div.
SP—Single Plate
Spi—Spicer Mfg. Co.
Str—Stromberg Carburetor Div.
Su—Suction
Tim—Timken-Detroit Axle Co.
UD—Under Drivers Seat
UF—Under Floor
Up—Updraft
Wau—Waukesha Motor Co.
Wil—Willard Storage Battery Co.
WG—Warner Gear Div.
WL—W. C. Lipe
Y—Yes
Zen—Zenith Carburetor Co.

Passenger Car Production by Cylinders

(U. S. and Canada)

	Per Cent Fours	Per Cent Sixes	Per Cent Eights	Per Cent Twelves and Sixteens	Total
1926	64.0	34.0	2.0	..	100.0
1927	49.7	47.1	3.2	..	100.0
1928	50.7	45.0	4.3	..	100.0
1929	40.7	54.3	5.0	..	100.0
1930	44.5	43.6	11.8	0.1	100.0
1931	33.3	52.0	14.5	0.2	100.0
1932	17.9	50.4	31.1	0.6	100.0
1933	3.2	61.8	34.7	0.3	100.0
1934	1.2	59.8	38.8	0.2	100.0
1935	0.5	59.5	39.4	0.2	100.0
1936	0.5	66.5	32.4	0.6	100.0
1937	1.5	63.5	34.2	0.8	100.0

Average Wholesale Price of Passenger Cars and Trucks

(Based on Units and Value of Production)

	Passenger Cars	Trucks
1921	$720	$1,035
1922	660	834
1923	607	745
1924	618	753
1925	656	843
1926	695	842
1927	735	875
1928	673	781
1929	622	720
1930	591	678
1931	566	629
1932	548	580
1933	489	536
1934	530	555
1935	528	545
1936	551	589
1937	560	575

AMERICAN STOCK, MARINE AND

Line Number	Make and Model	Designed for	Number of Cylinders Bore and Stroke (In.)	Rated Hp. (A.M.A.)	Maximum Brake Hp. at Specified R.P.M.	Piston Displacement (Cu. In.)	Compression Ratio	Maximum Torque at R.P.M. (Lb. Ft.)	No. of Cylinders Cast In One Piece	Crankcase—Upper Half Integral with Cylinders	Valves: Arrangement	Valves: Exhaust Head Material or S.A.E. No.	Valves: Max. Head Diameter (In.) Intake	Valves: Max. Head Diameter (In.) Exhaust	Valves: Min. Port Diameter (In.) Intake	Valves: Min. Port Diameter (In.) Exhaust	Valves: Lift (In.) Intake	Valves: Lift (In.) Exhaust	Valves: Stem Diameter (In.) Intake	Valves: Stem Diameter (In.) Exhaust	Valves: Seat Angle (Degrees)
1	Allis-Chalmers W-25	Tr, PU	4-4x4	25.0	31-1300	201.0	5.00	128-1150	4	In	I	Sil	1.68	1.50	1.50	1.31	.372	.372	.372	.372	45
2	Allis-Chalmers U-40	Tr, PU	4-4½x5	36.0	45-1200	318.0	4.74	200-950	4	In	I	Sil	2.03	1.78	1.75	1.50	.375	.375	.373	.372	30
3	Allis-Chalmers E-60	Tr, PU	4-5¼x6½	54.0	68-1050	562.0	4.40	370-750	4	Se	I	Sil	2.21	2.21	2.00	2.00	.437	.415	.434	.434	45
4	Allis-Chalmers L-90	Tr, PU	6-5¼x6½	82.0	102-1050	844.0	4.40	550-750	6	Se	I	Sil	2.21	2.21	2.00	2.00	.437	.415	.434	.434	45
5	Allis-Chalmers EO-60	Tr, PU	4-5¼x6½	56.0	70-1050	562.0	6.50	371-750	4	Se	I	Ste	2.43	2.09	2.25	1.87	.485	.464	.497	.496	45
6	Allis-Chalmers LO-90	Tr, PU	6-5¼x6½	86.0	107-1050	844.0	6.50	560-750	4	Se	I	Ste	2.43	2.09	2.25	1.87	.485	.464	.497	.496	45
7	American LaFrance 312	T, B	12-4x5	76.8	240-2800	754.0	5.10	520-1600	12	In	I	Sil	2.00	2.00	1.75	1.87	.410	.410	.375	.375	45
8	Autocar 315	T	6-3¾x4¾	33.7	81-2400	315.0	5.50	218-1000	6	Se	L	Sil	1.75	1 21/32	1.56	1.43	.375	.375	.437	.437	45
9	Autocar 358	T	6-4x4¾	38.4	89-2400	358.0	5.50	250-1000	6	Se	L	Sil	1.90	1 25/32	1.68	1.56	.375	.375	.437	.437	45
10	Autocar 404	T	6-4¼x4¾	43.3	100-2200	404.0	5.50	301-800	6	Se	L	Sil	2.06	1.93	1.87	1.75	.375	.375	.437	.437	45
11	Autocar 453	T	6-4½x4¾	48.6	113-2200	453.0	5.50	340-800	6	Se	L	Sil	2.06	1.93	1.87	1.75	.375	.375	.437	.437	45
12	Autocar 501	T	6-4½x5¼	48.6	124-2200	501.0	5.50	380-800	6	Se	L	Sil	2.06	1.93	1.87	1.75	.375	.375	.437	.437	45
13	Automatic J	Tr, St	4-5½x7	40.0	45-800	.....	4.00	310-650	1	Se	L	Sil	2.25	2.25	.....	.....	.312	.312	.....	.....	....
14	Automatic M	Tr, St	4-6½x8	62.0	67-675	.....	4.00	200-653	1	Se	L	Sil	2.50	2.50	.....	.....	.375	.375	.....	.....	....
15	Automatic N	Tr, St	4-7½x9	75.0	85-525	.....	4.00	181-675	1	Se	L	Sil	3.00	3.00	.....	.....	.375	.375	.....	.....	....
16	Automatic R	Tr, St	4-8½x10	90.0	105-525	.....	4.00	293-525	1	Se	L	Sil	3.25	3.25	.....	.....	.375	.375	.....	.....	....
17	Brennan Imp.	M	4-2.2x3	.....	20-3800	45.6	5.00	34-1800	4	Se	L	Sil	1.00	1.00	.87	.87	.250	.250	.312	.312	30
18	Brennan 150	T, B, Tr, M	6-4½x6½	.....	150-1000	620.3	5.00	510-1400	3	Se	I	Sil	2.50	2.50	2.12	2.12	.437	.437	.500	.500	45
19	Brennan 90	M	6-4x5½	.....	100-2000	414.7	4.50	270-900	3	Se	I	Sil	2.12	2.12	2.00	2.00	.375	.375	.437	.437	45
20	Brennan 125	M	6-4⅜x5½	.....	125-2000	496.0	6.00	325-1000	3	Se	I	Sil	2.12	2.12	2.00	2.00	.375	.375	.437	.437	45
21	Brennan E-4	M	4-4½x5	.....	50-1500	318.0	5.00	203-1000	4	Se	L	Sil	2.00	2.00	1.87	1.87	.375	.375	.375	.375	45
22	Brennan M	M	4-4x5	.....	40-2000	251.0	5.00	160-1000	4	Se	L	CI	2.00	2.00	1.87	1.87	.375	.375	.375	.375	45
23	Brennan 100	T, B, Tr	6-4⅜x5½	45.9	75-1800	496.0	4.50	320-800	3	Se	I	Sil	2.12	2.12	.....	.....	.375	.375	.437	.437	45
24	Brennan B-70	T, B, Tr	6-4½x5	38.4	70-1800	414.7	4.50	250-800	3	Se	I	Sil	2.12	2.12	.....	.....	.375	.375	.437	.437	45
25	Brennan CE	T	4-4½x5	32.4	55-1800	318.1	4.06	225-1000	4	Se	L	Sil	2.00	2.00	.....	.....	.375	.375	.375	.375	45
26	Brennan Imp.	M	4-2.2x3	.....	13-3400	45.6	5.00	24-2600	4	Se	L	Sil	1.09	1.09	.....	.....	.250	.250	.125	.125	30
27	Bridgeport F-20	M	4-3⅛x3⅞	15.6	45-3200	119.0	.....	82-2000	4	In	L	Sil	1.25	1.37	.....	.....	.312	.312	.312	.312	30
28	Bridgeport F-26	M	4-3¼x4	16.9	46-3000	133.0	.....	90-2000	4	In	L	Sil	1.12	1.25	.....	.....	.312	.312	.312	.312	30
29	Bridgeport F-50	M	6-3¾x4¼	33.7	70-2500	282.0	.....	170-1500	6	In	L	Sil	1.37	1.50	.....	.....	.312	.312	.312	.312	30
30	Bridgeport Pilot-40	M	4-4x4½	25.6	40-2000	226.0	.....	140-1000	4	In	L	Sil	1.50	1.75	.....	.....	.312	.312	.375	.375	30
31	Bridgeport Pilot-55	M	4-4¼x5	28.9	55-2000	283.0	.....	180-1000	4	In	L	Sil	1.87	1.87	.....	.....	.312	.312	.375	.375	45
32	Buda HP-205	T, Tr	4-3 13/16x4½	23.2	52-2600	205.0	4.75	132-1200	4	In	L	2112	1.65	1.53	1.50	1.37	.344	.344	.372	.372	45
33	Buda HP-217	T, Tr	4-3 13/16x4¾	23.2	54-2400	217.0	4.75	146-1200	4	In	L	2112	1.65	1.53	1.50	1.37	.344	.344	.372	.372	45
34	Buda KT-281	Tr	4-4⅛x5¼	27.2	50-1750	281.0	4.50	173-1000	4	Se	L	2112	1.87	1.87	1.62	1.62	.281	.312	.372	.372	45
35	Buda ET-350	T, B, Tr	4-4½x5½	32.4	49-1400	350.0	4.70	234-800	4	Se	L	2112	2.12	2.06	1.87	1.87	.281	.375	.434	.434	45
36	Buda YT-381	T, B, Tr	4-4½x6	32.4	50-1400	381.7	4.10	232-850	4	Se	L	2112	2.37	2.37	2.12	2.12	.281	.312	.434	.434	45
37	Buda BTU	T, B, Tr	4-5x6½	40.0	61-1200	510.5	4.45	330-650	4	Se	L	2112	2.50	2.50	2.25	2.25	.375	.375	.434	.434	45
38	Buda FR	T, B, Tr	4-5½x6½	48.5	78-1200	617.7	4.45	410-650	4	Se	L	2112	2.50	2.50	2.25	2.25	.375	.375	.434	.434	45
39	Buda YR-425	T	4-4¾x6	36.0	57-1400	425.3	3.80	265-750	4	Se	L	2112	2.37	2.37	2.12	2.12	.281	.312	.434	.434	45
40	Buda JV-4	Tr	4-5¾x7⅛	52.9	85-1200	749.0	3.85	472-750	2	Se	L	2112	2.75	2.78	2.50	2.50	.375	.375	.497	.497	45
41	Buda JK-4	Tr	4-6x7⅛	57.6	115-1200	806.0	4.70	560-700	2	Se	L	2112	2.93	2.93	2.50	2.50	.375	.375	.434	.434	30
42	Buda JL-877	.....	4-6¼x7⅛	62.5	108-1000	874.0	4.45	645-650	2	Se	L	2112	2.93	2.93	2.50	2.50	.375	.375	.434	.434	30
43	Buda HP-260	T, B	6-3½x4½	29.4	68-2800	259.9	4.75	165-1200	6	In	L	2112	1.65	1.53	1.50	1.37	.344	.344	.372	.372	45
44	Buda HP-298	T, B, Tr	6-3¾x4½	33.7	77-2800	298.2	4.75	190-1100	6	In	L	2112	1.65	1.53	1.50	1.37	.344	.344	.372	.372	45
45	Buda HP-326	T, B, Tr	6-3 13/16x4¾	34.8	75-2600	325.4	4.75	190-900	6	In	L	2112	1.65	.....	1.50	1.37	.344	.344	.372	.372	30
46	Buda K-325	T, B, Tr	6-3 13/16x4¾	34.8	87-2800	325.4	4.80	202-1100	6	In	L	2112	1.90	1.78	1.75	1.62	.400	.400	.372	.372	45
47	Buda K-369	T, B, Tr	6-4 1/16x4¾	39.6	99-2800	369.0	4.73	234-1100	6	In	L	2112	1.90	1.78	1.75	1.62	.400	.400	.372	.372	45
48	Buda K-393	T, B, Tr	6-4 3/16x4¾	42.0	103-2600	393.0	4.80	260-1200	6	In	L	2112	1.90	1.78	1.75	1.62	.400	.400	.372	.372	45
49	Buda K-428	T, B, Tr	6-4⅜x4¾	45.9	107-2600	428.0	4.75	280-1200	6	In	L	2112	1.90	1.78	1.75	1.62	.400	.400	.372	.372	45
50	Buda LO-468	T, B, Tr	6-4½x5½	43.3	120-2400	468.0	5.00	342-1200	6	In	I	CI	1.90	1.78	1.75	1.62	.312	.312	.372	.372	30
51	Buda L-525	T, B, Tr	6-4½x5½	48.6	111-2200	525.0	4.75	340-900	6	In	I	2112	1.90	1.78	1.75	1.62	.400	.400	.372	.372	45
52	Buda LO-525	T, B, Tr	6-4½x5½	48.6	135-2400	525.0	5.00	384-1100	6	In	I	2112	1.90	1.78	1.75	1.62	.312	.312	.372	.372	30
53	Buda GF-638	T, B, Tr	6-4¾x6	64.0	134-2000	638.0	4.75	405-1000	6	Se	L	2112	2.50	2.37	2.25	2.12	.375	.375	.434	.434	30
54	Buda M-707	T, B, Tr	6-5x6	60.0	143-1800	706.9	4.75	464-1000	6	In	I	2112	2.39	2.14	2.12	1.87	.360	.360	.435	.435	30
55	Buda M-766	T, B, Tr	6-5x6½	60.0	155-1800	765.8	4.75	496-1000	6	In	I	2112	2.39	2.14	2.12	1.87	.360	.360	.435	.435	30
56	Buda JV-6	Tr	6-5¾x7¼	79.3	142-1200	1129.5	3.88	696-600	2	Se	L	2112	2.75	2.78	2.50	2.50	.437	.437	.497	.497	45
57	Buda JK-6	Tr	6-6x7¼	86.4	188-1400	1230.0	4.70	810-700	2	Se	L	2112	2.93	2.93	2.50	2.50	.438	.438	.497	.497	30
58	Buda JL-1335	T, B, Tr	6-6¼x7¼	93.7	164-1000	1334.6	4.40	915-600	2	Se	L	2112	2.93	2.93	2.50	2.50	.438	.438	.497	.497	30
59	Buda P-1879	Ind	6-6¾x8¾	184.0	232-1000	1879.0	4.50	1305-750	6	In	I	2112	2.71	2.53	2.50	2.28	.703	.703	.558	.558	45
60	Buda KM-428-R	M	6-4⅜x4¾	.....	105-2400	428.0	5.30	280-1200	6	In	L	2112	1.90	1.78	1.75	1.62	.400	.400	.372	.372	45
61	Buda KM-428	M	6-4⅜x4¾	.....	105-2400	428.0	5.30	280-1200	6	In	L	2112	1.90	1.78	1.75	1.62	.400	.400	.372	.372	45
62	Buda HPM-298	M	6-3¾x4½	.....	81-2800	298.2	5.25	210-1000	6	In	L	2112	1.65	1.53	1.50	1.37	.344	.344	.372	.372	45
63	Buda HPM-298-R	M	6-3¾x4½	.....	81-2800	298.2	5.25	210-1000	6	In	L	2112	1.65	1.53	1.50	1.37	.344	.344	.372	.372	45
64	Buda HPM-205	M	4-3 13/16x4½	.....	57-2800	205.0	5.40	142-1200	4	In	L	2112	1.65	1.53	1.50	1.37	.344	.344	.372	.372	45
65	Buda HPM-205-R	M	4-3 13/16x4½	.....	57-2800	205.0	5.40	142-1200	4	In	L	2112	1.65	1.53	1.50	1.37	.344	.344	.372	.372	45
66	Buda HPM-260	M	6-3 13/16x4½	.....	70-2800	259.9	5.25	183-1000	6	In	L	2112	1.65	1.53	1.50	1.37	.344	.344	.372	.372	45
67	Buda HPM-260-R	M	6-3 13/16x4½	.....	70-2800	259.9	5.25	183-1000	6	In	L	2112	1.65	1.53	1.50	1.37	.344	.344	.372	.372	45
68	Buda GM-638	M	6-4¾x6	.....	134-2000	638.0	4.75	405-1000	6	Se	L	2112	2.50	2.37	2.25	2.12	.375	.375	.434	.434	30
69	Buda GM-638-R	M	6-4¾x6	.....	134-2000	638.0	4.75	405-1000	6	Se	L	2112	2.50	2.37	2.25	2.12	.375	.375	.434	.434	30
70	Buda LM-525	M	6-4½x5½	.....	121-2200	525.0	5.20	364-800	6	In	L	2112	1.90	1.78	1.75	1.62	.400	.400	.372	.372	45
71	Buda LM-525-R	M	6-4½x5½	.....	121-2200	525.0	5.20	364-900	6	In	L	2112	1.90	1.78	1.78	1.62	.400	.400	.372	.372	45
72	Buda KM-393	M	6-4 3/16x4¾	.....	101-2400	393.0	5.30	260-1200	6	In	L	2112	1.90	1.78	1.75	1.62	.400	.400	.372	.372	45
73	Buda KM-393-R	M	6-4 3/16x4¾	.....	101-2400	393.0	5.30	260-1200	6	In	L	2112	1.90	1.78	1.75	1.62	.400	.400	.372	.372	45
74	Buda KM-369	M	6-4 1/16x4¾	.....	98-2600	369.0	5.30	245-1100	6	In	L	2112	1.90	1.78	1.75	1.62	.400	.400	.372	.372	45
75	Buda KM-369-R	M	6-4 1/16x4¾	.....	98-2600	369.0	5.30	245-1100	6	In	L	2112	1.90	1.78	1.75	1.62	.400	.400	.372	.372	45
76	Buffalo NAVY-BA	M	4-3½x5	.....	45-1800	192.0	5.00	131-1400	4	In	L	CI	1.93	1.93	1.75	1.75	.312	.375	.375	.375	45
77	Buffalo Dreadnought 4	M	4-5⅞x7	.....	120-1200	759.0	4.60	525-1200	2	Se	I	Sil	3.09	2.84	2.87	2.62	.540	.540	.500	.500	45
78	Buffalo Dreadnought 6	M	6-5⅞x7	.....	180-1200	1138.0	4.60	790-1200	2	Se	I	Sil	3.09	2.84	2.87	2.62	.540	.540	.500	.500	45
79	Buffalo Dreadnought 8	M	8-5⅞x7	.....	240-1200	1518.0	4.60	1050-1200	2	Se	I	Sil	3.09	2.84	2.87	2.62	.540	.540	.500	.500	45
80	Buffalo ATT-4	M	4-8¼x9	.....	200-900	1925.0	4.20	1176-900	2	Se	L	Sil	4.12	4.06	3.62	3.43	.812	.812	.683	.683	45
81	Buffalo ATT-6	M	6-8¼x9	.....	300-900	2887.0	4.20	1764-900	2	Se	L	Sil	4.12	4.06	3.62	3.43	.812	.812	.683	.683	45
82	Buffalo ATT-8	M	8-8¼x9	.....	400-900	3849.0	4.20	2352-900	2	Se	L	Sil	4.12	4.06	3.62	3.43	.812	.812	.683	.683	45
83	Buffalo RA-4	B, Tr	4-5⅞x7	.....	120-1200	759.0	5.00	525-1200	2	Se	I	Sil	2.87	2.87	2.62	2.62	.540	.540	.500	.500	45
84	Buffalo RA-6	B, Tr	6-5⅞x7	.....	180-1200	1138.0	5.00	790-1200	2	Se	I	Sil	2.87	2.87	2.62	2.62	.540	.540	.500	.500	45
85	Buffalo RA-8	B, Tr	8-5⅞x7	.....	240-1200	1518.0	5.00	1050-1200	2	Se	I	Sil	2.87	2.87	2.62	2.62	.540	.540	.500	.500	45
86	Capitol LA-12	M	12-5x7	.....	425-1800	1650.0	5.00	.....	1	Se	I	Sil	2.75	2.75	2.50	2.50	.437	.375	.437	.437	45
87	Capitol CD-12	M	12-4¼x6	.....	435-2300	1145.0	5.30	.....	4	Se	I	Sil	1.68	1.68	1.50	1.50	.390	.390	.343	.343	45
88	Capitol T-12	M	12-5¾x6¼	.....	600-2000	1947.0	5.30	.....	3	Se	I	Sil	2.06	2.06	1.87	1.87	.500	.500	.500	.500	45
89	Chevrolet 1938	T	6-3½x3¾	29.4	78-3200	216.5	6.25	170-(k)	6	In	I	Ext	1.64	1.46	.....	.....	.305	.319	.340	.340	30
90	Chris-Craft B	M	4-3¼x4	.....	55-3200	132.7	6.20	.....	4	In	L	Sil	1.50	1.37	1.25	1.12	.312	.312	.312	.312	30
91	Chris-Craft BA	M	4-3¼x4	.....	60-3200	132.7	7.50	.....	4	In	L	Sil	1.50	1.37	1.25	1.12	.312	.312	.312	.312	30
92	Chris-Craft K	M	6-3⅜x4⅛	.....	85-3200	221.4	6.20	.....	6	In	L	Sil	1.62	1.37	1.46	1.25	.312	.312	.312	.312	30
93	Chris-Craft KA	M	6-3⅜x4⅛	.....	95-3500	221.4	7.50	.....	6	In	L	Sil	1.62	1.37	1.46	1.25	.312	.312	.312	.312	30
94	Chris-Craft KB	M	6-3⅜x4⅛	.....	131-3800	221.4	7.50	.....	6	In	L	Sil	1.62	1.37	1.46	1.25	.344	.344	.312	.312	30
95	Chris-Craft L	M	6-3⅝x4¼	.....	110-3200	263.2	6.20	.....	6	In	L	Sil	1.84	1.75	1.62	1.50	.356	.356	.375	.375	30
96	Chris-Craft LB	M	6-3⅝x4¼	.....	118-3300	263.2	6.75	.....	6	In	L	Sil	1.84	1.75	1.62	1.50	.356	.356	.375	.375	30

For abbreviations see pages 292 and 293

COMMERCIAL VEHICLE ENGINES

Front End Drive—Type	Pistons: Material	Pistons: Length (In.)	Pistons: Weight (with Pins, Rings and Bushing)—(Oz.)	Pistons: Piston Pin—Diameter and Length (In.)	Number of Rings per Piston	Connecting Rods: Material	Connecting Rods: Center to Center Length (In.)	Connecting Rods: Weight—With Bushing and Cap (Oz.)	Crankshaft: Material	Crankshaft: Counterbalances Used	Crankshaft: Crank-pin Diameter and Length (In.)	Main Bearings: Number	Main Bearings: Diameter and Length (In.) Front	Main Bearings: Diameter and Length (In.) Rear	Oil Pressure To	Spark Plug: Recommended Make	Spark Plug: Thread Size	Carburetor: Make	Carburetor: Size	Adapted for Use of Kerosene or Distillate	Weight (Without Carburetor or Ignition)—Lb.	Overall Dimensions (In.): Width	Overall Dimensions (In.): Height	Overall Dimensions (In.): Length	Line Number
HI	CI	4.43	61.0	.98x3.50	4	CS	7½	42	CS	N	2.35x1.54	3	2.41x1.59	2.46x1.75	abce	AC	14 mm.	Zen	1	Yes	425	19¾	31⅜	33⅝	1
HI	CI	5.25	80.0	1.31x4.06	4	CS	9½	96	CS	N	2.37x2.37	3	2.50x2.31	2.50x2.74	abcde	CA	⅞-18	Zen	1¼	Yes	980	26 1/16	36⅞	43¾	2
HI	CT	6.75	158.0	1.50x4.87	4	CS	13	176	CS	N	2.75x3.25	3	3.00x3.50	3.00x4.74	abcde	CA	⅞-18	Zen	1½	Yes	1830	27	44⅞	57⅝	3
HI	CT	5.25	158.0	1.50x4.87	4	CS	13	176	CS	...	2.75x3.25	4	3.00x3.50	3.00x4.74	abcde	CA	⅞-18	Zen	1½	No	2870	29 11/16	51¼	72 1/16	4
HI	CT	8.18	179.0	1.50x4.87	4	CS	13	176	CS	N	2.75x3.25	3	3.00x3.50	3.00x4.74	abcde	CH	⅞-18	FP	......	Di	1925	27	44⅞	57⅝	5
HI	CT	8.18	179.0	1.50x4.87	4	CS	13	176	CS	N	2.75x3.25	4	3.00x3.50	3.00x4.74	abcde	CH	⅞-18	FP	......	Di	3000	29 11/16	51¼	72 1/16	6
Ch	Al	4.84	39.0	1.12x3.62	4	AS	12	85	CNM	Y	2.75x2.75	4	3.50x2.25	3.50x2.37	abcde	CH	⅞-18	Str	1¾	No	1965	31¾	43⅜	58 1/16	7
HI	Ala	4.87	36.0	1.12x3.18	4	AS	10¼	73	1040	N	2.25x1.62	7	3.00x1.87	3.00x2.62	abcdef	CH	18 mm.	Str	......	No	1145	27¾	34 11/16	43 11/16	8
HI	Ala	4.87	43.0	1.12x3.43	4	AS	10¼	73	1040	N	2.25x1.62	7	3.00x1.87	3.00x2.62	abcdef	CH	⅞	Str	......	No	1155	27¾	34 11/16	43 11/16	9
HI	Ala	5.75	51.0	1.12x3.68	4	AS	10¼	83	CM	N	2.50x1.71	7	3.25x1.87	3.25x2.87	abcdef	CH	⅞	Str	......	No	1325	27¾	38⅞	47 1/16	10
HI	Ala	5.75	57.0	1.12x3.93	4	AS	10¼	83	CM	N	2.50x1.71	7	3.25x1.87	3.25x2.87	abcdef	CH	⅞	Str	......	No	1325	27¾	38⅞	47 1/16	11
HI	Ala	5.75	57.0	1.12x3.93	4	AS	10¼	88	CM	N	2.50x1.81	7	3.25x1.87	3.25x2.87	abcdef	CH	18 mm.	Str	......	No	1350	27¾	39¾	47¾	12
Sp	CI	7.00	.....	1.43x4.62	...	CS	......	......	......	N	2.25x....	5	2.25x4.75	2.25x4.00	abce	Op	⅞-18	Op	1½	Op	1800	19¼	36	59	13
Sp	CI	9.00	.....	1.68x6.12	...	CS	......	......	......	N	2.75x....	5	2.75x6.62	2.75x5.00	abce	Op	⅞-18	Op	1¾	Op	2700	22	43	68¼	14
Sp	CI	10.50	.....	2.00x7.12	...	CS	......	......	......	N	3.00x....	5	3.00x7.00	3.00x6.00	abc	Op	⅞-18	Op	2	Op	3700	24	48	78	15
Sp	CI	11.00	.....	2.43x8.37	...	CS	......	......	......	N	3.50x....	5	3.50x6.50	3.50x5.12	abc	Op	⅞-18	Op	⅞	Op	4700	27	54	84	16
HI	Al	2.62	6.0	.62x2.00	3	AS	7	......	CNS	N	1.37x1.25	2	ball	roller	bce	CH	....	TZ	¾	No	160	8¾	12	29	17
Be	SS	5.00	72.0	1.37x4.00	5	AS	12	80	CNS	N	2.62x2.62	7	2.62x5.00	2.62x3.50	abcde	CA	....	Str	1¾	Yes	1450	20	30	74	18
HI	SS	4.50	64.0	1.17x3.87	4	CS	......	......	CNS	N	2.50x2.00	3	2.75x4.50	2.75x3.00	abcde	CA	....	Str	1½†	Yes	750	19¾	24¾	65	19
HI	SS	4.50	76.0	1.25x3.87	5	AS	11	......	CNS	Y	2.50x2.00	3	2.75x4.50	2.75x3.00	abcde	CA	....	Str	1½†	D	900	19¾	24¾	65	20
HI	SS	5.00	72.0	1.17x4.00	5	AS	11	64	NS	N	2.50x2.50	3	2.50x4.25	2.50x3.50	abcde	CA	....	Str	1¼†	Yes	950	16	18	53	21
Sp	CI	5.00	.....	1.17x4.00	4	AS	11	......	CNS	N	2.50x2.50	3	2.12x4.25	2.12x2.25	abcde	CA	....	Str	1¼†	Yes	650	12 1/16	19½	53¾	22
HI	SS	4.50	76.0	1.25x3.87	5	AS	......	......	CNS	N	2.50x2.00	3	2.75x4.50	2.75x3.00	abce	CA	⅞-18	Str	1½	Yes	875	25¾	33¾	49¼	23
HI	SS	4.50	64.0	1.17x3.87	4	CS	......	......	CNS	N	2.50x2.00	3	2.75x4.50	2.75x3.00	abcde	CA	⅞-18	Str	1½	Yes	800	25¾	33¾	49¼	24
Sp	SS	5.00	72.0	1.17x4.00	5	AS	11	64	NS	...	2.50x2.50	3	2.25x4.25	2.25x3.50	abce	CA	....	Str	1¼	Yes	650	21	29¾	37⅛	25
HI	Lyn	2.62	6.0	.75x....	3	AS	......	......	CNS	...	......	2	ball	roller	abcde	CH	....	TZ	¾†	No	130	13½	18	20	26
HI	Al	3.00	.....	.75x3.00	4	AS	......	......	NS	N	1.75x1.50	3	1.87x1.62	1.87x1.62	abcde	SP	⅞-18	Sch	1¼†	No	365	21	24	36	27
HI	CI	3.06	.....	.75x3.12	4	AS	6 9/16	......	NS	N	1.75x1.50	3	2.00x1.62	2.00x1.62	abcde	CH	⅞-18	Zen	1¼†	No	348	19	21	33	28
HI	CI	3.50	.....	1.00x3.62	4	AS	8	......	NS	N	2.00x1.50	7	2.50x1.31	2.50x2.12	abcde	CH	⅞-18	Zen	1½†	No	350	22	24⅝	51	29
HI	CI	4.00	.....	1.00x3.87	3	AS	8	......	NS	N	2.00x1.50	3	2.00x2.18	2.00x2.62	abcde	SP	⅞-18	Zen	1¼†	No	590	22	24⅝	45	30
HI	CI	5.00	.....	1.37x4.87	3	AS	9½	......	NS	N	2.00x2.25	3	2.00x3.18	2.00x3.31	abcde	SP	⅞-18	Zen	1¼†	D	890	17	18½	53½	31
HI	CI	3.75	42.0	1.12x3.22	4	CS	9½	42	CS	N	2.12x1.62	5	3.00x1.50	3.00x2.12	abcde	AC	18 mm.	Zen	1¼	No	525	26	29 11/16	31 11/16	32
HI	CI	3.75	42.0	1.12x3.22	4	CS	9½	42	CS	N	2.12x1.62	5	3.00x1.50	3.00x2.12	abcde	AC	18 mm.	Zen	1¼	No	540	25¾	31 1/16	38 3/16	33
HI	CI	5.00	65.0	1.50x3.12	4	CS	11¼	89	CS	N	2.00x2.25	3	1.87x2.87	2.12x3.44	abcde	AC	⅞-18	Zen	1¼	No	875	25¾	33¼	40 11/16	34
HI	CI	5.37	89.0	1.12x3.68	4	CS	12¼	113	CS	N	2.12x2.50	3	2.12x3.09	2.37x3.94	abcde	AC	⅞-18	Zen	1¼	No	980	25¾	30 11/32	40 1/16	35
HI	CI	6.25	97.0	1.25x3.87	4	CS	13¼	114	CS	N	2.25x3.00	3	2.12x3.31	2.37x4.44	abcde	AC	⅞-18	Zen	1¼	No	1087	25¾	36 1/16	47½	36
HI	CI	6.75	142.0	1.37x4.37	4	AS	14⅝	163	CS	N	2.50x3.12	3	2.25x4.12	2.62x4.69	abcde	AC	⅞-18	Zen	1½	No	1409	28¾	40 1/16	52 1/16	37
HI	CI	6.75	144.0	1.37x4.87	4	AS	14⅝	163	CS	N	2.50x3.12	3	2.25x4.12	2.62x4.69	abcde	AC	⅞-18	Zen	1½	No	1430	28¾	40 1/16	52 1/16	38
HI	CI	6.12	111.0	1.43x4.11	4	AS	13¼	106	CS	N	2.25x3.00	3	2.50x3.00	2.50x4.06	abcde	AC	⅞-18	Zen	1½	No	1087	25¾	36 1/16	47½	39
HI	CI	6.87	172.0	2.00x4.87	4	AS	14⅝	227	CS	N	3.00x2.81	3	3.00x4.75	3.00x4.75	abcde	AC	⅞-18	Zen	1¾	No	1925	30	44 1/16	58½	40
HI	CI	6.87	172.0	2.00x5.12	4	CS	14⅝	227	CS	Y	3.00x3.31	3	3.00x4.75	3.00x4.75	abcde	AC	⅞-18	Zen	1¾	No	1925	30	44 1/16	58½	41
HI	CI	6.87	199.5	2.00x5.33	4	......	14⅝	227	CS	N	3.00x3.31	3	3.00x4.75	3.00x4.75	abcde	AC	⅞-18	Zen	1¾	No	1925	30	44 1/16	58 1/16	42
HI	CI	3.75	37.0	1.12x3.00	4	CS	9½	42	CS	N	2.12x1.62	7	3.00x1.50	3.00x2.12	abcde	AC	18 mm.	Zen	1½	No	......	25¾	33 1/16	39 11/16	43
HI	CI	3.75	42.0	1.12x3.25	4	CS	9½	42	CS	N	2.12x1.62	7	3.00x1.50	3.00x2.12	abcde	AC	18 mm.	Zen	1½	No	675	25¾	33 1/16	39 11/16	44
HI	CI	3.75	42.0	1.12x3.22	4	CS	9½	42	CS	N	2.12x1.62	7	3.00x1.50	3.00x2.12	abcde	AC	18 mm.	Zen	1½	No	......	25¾	33 1/16	39 11/16	45
HI	CI	4.37	59.5	1.25x3.22	4	CS	9½	58	CS	N	2.37x1.75	7	3.00x1.75	3.00x2.50	abcde	AC	18 mm.	Zen	1½	No	900	25¾	30 11/32	47 5/32	46
HI	CI	4.37	63.5	1.25x3.47	4	CS	9½	58	CS	N	2.37x1.75	7	3.00x1.75	3.00x2.50	abcde	AC	18 mm.	Zen	1¾	No	900	25¾	30 11/32	47 5/32	47
HI	CI	4.37	65.5	1.25x3.47	4	CS	9½	58	CS	N	2.37x1.75	7	3.00x1.75	3.00x2.50	abcde	AC	18 mm.	Zen	1¾	No	900	25¾	30 11/32	47 5/32	48
HI	CI	4.37	68.3	1.25x3.82	4	CS	9½	58	CS	N	2.37x1.75	7	3.00x1.75	3.00x2.50	abede	AC	18 mm.	Zen	1¾	No	900	25¾	30 11/32	47 5/32	49
HI	CI	4.75	84.0	1.25x3.56	5	CS	11	78	CS	...	2.37x1.75	7	3.00x2.50	3.00x2.50	abcde	AC	14 mm.	Zen	1¾	No	1210	29 1/16	38 11/32	49 5/16	50
HI	CI	4.75	88.0	1.25x3.81	4	CS	11	66	CS	N	2.37x1.75	7	3.00x1.75	3.00x2.50	abcde	AC	18 mm.	Zen	1¾	No	950	25¾	33 7/32	47 5/32	51
HI	Al	4.75	88.0	1.25x3.81	5	AS	11	78	CS	N	2.37x1.75	7	3.00x2.50	3.00x2.50	abcde	AC	14 mm.	Zen	1¾	No	1195	27 9/16	38 21/32	49⅝	52
HI	CI	6.12	94.0	1.62x4.00	4	AS	13¼	139	CS	N	3.00x2.25	4	3.00x2.25	3.00x3.69	abcde	AC	18 mm.	Zen	1¾	No	1265	28¾	43 21/32	53 13/16	53
HI	CI	6.00	127.0	1.75x4.15	5	......	12½	164	CS	N	3.24x2.12	7	3.00x3.00	3.00x3.00	abcde	AC	14 mm.	Zen	1¾	No	2300	31 17/32	49 9/16	57½	54
HI	CI	6.00	127.0	1.75x4.15	5	AS	12½	164	CS	N	3.24x2.12	7	3.00x3.00	3.00x3.00	abcde	AC	18 mm.	Zen	1¾	No	2360	31 17/32	49 9/16	57½	55
HI	CI	6.87	172.0	2.00x4.87	4	AS	15¼	239	CS	Y	3.50x3.31	4	3.50x4.75	3.50x4.75	abcde	AC	⅞-18	Zen	2	No	3210	28⅝	43	74 9/16	56
HI	CI	6.87	196.0	2.00x5.12	4	AS	15¼	239	CS	N	3.50x3.31	4	3.50x4.75	3.50x4.75	abcde	AC	⅞-18	Zen	2	No	3250	28⅝	43	74 9/16	57
HI	CI	6.81	199.5	2.00x5.33	4	AS	15¼	239	CS	N	3.50x3.31	4	3.50x4.75	3.50x4.75	abcde	AC	⅞-18	Zen	2	No	3270	28⅝	43	74 9/16	58
HI	Al	9.31	262.7	2.75x5.53	5	CS	17¾	430	CS	Y	3.75x3.50	7	3.75x2.31	3.75x3.48	abcde	AC	18 mm.	Zen(2)	2	No	......	48	69 5/16	86 5/32	59
HI	CI	4.37	68.3	1.25x3.82	4	CS	9½	58	CS	N	2.37x1.75	7	3.00x1.75	3.00x2.50	abcde	AC	18 mm.	Str	1¾†	No	1430	24 13/16	29½	60 11/16	60
HI	CI	4.37	68.3	1.25x3.82	4	CS	9½	58	CS	N	2.37x1.75	7	3.00x1.75	3.00x2.50	abcde	AC	18 mm.	Str	1¾†	No	1300	24 13/16	29½	60 11/16	61
HI	CI	3.75	42.0	1.12x3.25	4	CS	9½	42	CS	N	2.12x1.62	7	3.00x1.50	3.00x2.12	abcde	AC	18 mm.	Str	1½†	No	890	22⅝	28 11/16	54½	62
HI	CI	3.75	42.0	1.12x3.25	4	CS	9½	42	CS	N	2.12x1.62	7	3.00x1.50	3.00x2.12	abcde	AC	18 mm.	Str	1½†	No	950	22⅝	28 11/16	60¾	63
HI	CI	3.75	42.0	1.12x3.22	4	CS	9½	42	CS	N	2.12x1.62	5	3.00x1.50	3.00x2.12	abcde	AC	18 mm.	Str	1¼†	No	715	23¼	27 9/16	43⅜	64
HI	CI	3.75	42.0	1.12x3.22	4	CS	9½	42	CS	N	2.12x1.62	5	3.00x1.50	3.00x2.12	abcde	AC	18 mm.	Str	1¼†	No	770	23¼	27 9/16	51 5/32	65
HI	CI	3.75	37.0	1.12x3.00	4	CS	9½	42	CS	N	2.12x1.62	7	3.00x1.50	3.00x2.12	abcde	AC	18 mm.	Str	1½†	No	880	22⅝	28 11/16	54½	66
HI	CI	3.75	37.0	1.12x3.00	4	CS	9½	42	CS	N	2.12x1.62	7	3.00x1.50	3.00x2.12	abcde	AC	18 mm.	Str	1½†	No	940	22⅝	28 11/16	60¾	67
HI	CI	6.12	94.0	1.62x4.00	4	AS	13¼	138.6	CS	N	3.00x2.25	4	3.00x2.25	3.00x3.69	abcde	AC	18 mm.	Str	1¾†	No	1675	25½	35¾	70 25/32	68
HI	CI	6.12	94.0	1.62x4.00	4	AS	13¼	138.6	CS	N	3.00x2.25	4	3.00x2.25	3.00x3.69	abcde	AC	18 mm.	Zen	1¾†	No	1900	25½	35¾	84 11/32	69
HI	CI	4.75	88.0	1.25x3.94	4	CS	11	66	CS	N	2.37x1.75	7	3.00x1.75	3.00x2.50	abcde	AC	18 mm.	Str	1¾†	No	1320	25 3/16	31 13/16	60 11/16	70
HI	CI	4.75	88.0	1.25x3.94	4	CS	11	66	CS	N	2.37x1.75	7	3.00x1.75	3.00x2.50	abcde	AC	18 mm.	Str	1¾†	No	1475	25 3/16	31 13/16	68⅞	71
HI	CI	4.37	65.5	1.25x3.47	4	CS	9½	58	CS	N	2.37x1.75	7	3.00x1.75	3.00x2.50	abcde	AC	18 mm.	Str	1¾†	No	1260	24 13/16	29½	60 11/16	72
HI	CI	4.37	65.5	1.25x3.47	4	CS	9½	58	CS	N	2.37x1.75	7	3.00x1.75	3.00x2.50	abcde	AC	18 mm.	Str	1¾†	No	1380	24 13/16	29½	65 9/16	73
HI	CI	4.37	63.5	1.25x3.47	4	CS	9½	58	CS	N	2.37x1.75	7	3.00x1.75	3.00x2.50	abcde	AC	18 mm.	Str	1¾†	No	1250	24 13/16	29½	60 11/16	74
HI	CI	4.37	63.5	1.25x3.47	4	CS	9½	58	CS	N	2.37x1.75	7	3.00x1.75	3.00x2.50	abcde	AC	18 mm.	Str	1¾†	No	1380	24 13/16	29½	65 9/16	75
HI	CI	3.75	37.0	1.09x3.31	3	CS	10¼	50	CS	N	1.87x2.12	3	2.25x3.00	2.18x2.87	....	AC	⅞-18	Zen	1†	K	720	22	28	53	76
HI	Al	6.12	132.0	1.50x5.62	5	AS	14	147	CNS	N	.0x2.37	5	3.75x4.12	3.75x4.50	abcg	AC	⅞-18	Str	2†	No	2500	24	46	78	77
HI	Al	6.12	132.0	1.50x5.62	5	AS	14	147	CNS	N	3.00x2.37	7	3.75x4.12	3.75x4.50	abcg	AC	⅞-18	Str(2)	2†	No	3000	24	46	94	78
HI	Al	6.12	132.0	1.50x5.62	5	AS	14	147	CNS	N	3.00x2.37	9	3.75x4.12	3.75x4.50	abcg	AC	⅞-18	Zen(2)	2½†	No	4000	24	46	111	79
HI	Al	9.00	312.0	2.25x7.62	4	AS	21	186	CNS	N	4.25x4.00	5	5.00x7.00	5.00x7.00	abce	AC	14 mm.	Zen	2½†	No	7000	47	54	132	80
HI	Al	9.00	312.0	2.25x7.62	4	AS	21	186	CNS	N	4.25x4.00	7	5.00x7.00	5.00x7.00	abce	AC	14 mm.	Zen(2)	2½†	No	11600	47	54	160	81
HI	Al	9.00	312.0	2.25x7.62	4	AS	21	186	CNS	N	4.25x4.00	9	5.00x7.00	5.00x7.00	abce	AC	14 mm.	Zen(4)	2½†	No	15000	47	54	188	82
HI	Al	6.12	.....	1.50x5.75	4	AS	14	......	CNS	Y	3.00x2.37	5	3.75x4.50	3.75x4.12	ab	AC	⅞-18	Zen	2½	No	2800	25	48	56	83
HI	Al	6.12	.....	1.50x5.75	4	AS	14	......	CNS	Y	3.00x2.37	7	3.75x4.50	3.75x4.12	ab	AC	⅞-18	Zen	2½	No	3400	25	48	69	84
HI	Al	6.12	.....	1.50x5.75	4	AS	14	......	CNS	Y	3.00x2.37	9	3.75x4.50	3.75x4.12	ab	AC	⅞-18	Zen	2½	No	4000	25	48	85	85
Be	Ala	5.25	.....	1.25x4.23	4	AS	12	......	CNS	N	2.37x2.50	7	2.62x....	2.62x....	abcem	AC	18 mm.	Zen	†	No	1700§	30	39 7/16	84	86
Sbe	Al	3.12	.....	1.12x3.93	3	AS	10	......	CNS	N	2.50x2.25	7	3.00x....	3.00x....	abcem	AC	18 mm.	Str(2)	2 †	No	1235§	35½	31¾	86¾	87
Be	Al	5.50	.....	1.50x5.25	4	AS	10 15/16	......	CNS	N	3.00x2.50	7	3.25x....	3.25x....	abcem	BG	18 mm.	Str	†	No	2350§	33⅞	39¼	97	88
HI	CI	4.17	.....	.864x3.15	3	CS	6 13/16	28.3	CS	Y	2.31x1.50	4	2.68x1.18	2.78x1.62	acg	AC	14 mm.	Car	1¼	No	......	......	......	......	89
HI	Al	3.06	.....	.750x2.87	3	AS	6 9/16	......	CS	N	1.75x1.12	3	2.00x1.62	2.00x1.62	ab	CH	14 mm.	Zen	1¼†	No	450	24⅛	23 1/16	31¾	90
HI	Al	3.06	.....	.750x2.87	3	AS	6 9/16	......	CS	N	1.75x1.12	3	2.00x1.62	2.00x1.62	ab	CH	14 mm.	Zen	1¼†	No	435	24⅛	23 1/16	31¾	91
HI	Al	3.50	.....	.875x2.87	4	AS	7	......	CS	N	2.00x1.25	7	2.50x1.93	2.50x1.37	ab	CH	14 mm.	Zen	1⅜†	No	600	24⅛	25¾	40	92
HI	Al	3.50	.....	.875x2.87	4	AS	7	......	CS	N	2.00x1.25	7	2.50x1.93	2.50x1.37	ab	CH	14 mm.	Zen	1⅜†	No	595	24⅛	25¾	40	93
HI	Al	3.50	.....	.875x2.87	4	AS	7	......	CS	N	2.00x1.25	7	2.50x1.93	2.50x1.37	ab	CH	14 mm.	Zen(3)	1½†	No	580	24⅛	31 9/16	40	94
HI	Al	4.18	.....	1.00x3.18	4	AS	8	......	CS	N	2.00x1.50	7	2.50x2.12	2.50x1.37	ab	CH	14 mm.	Zen	1¾†	No	815	24⅛	27⅞	46 7/16	95
HI	Al	4.18	.....	1.00x3.18	4	AS	8	......	CS	N	2.00x1.50	7	2.50x2.12	2.50x1.37	ab	CH	14 mm.	Zen	1¾†	No	785	24⅛	27⅞	46 7/16	96

For abbreviations see pages 292 and 293

AMERICAN STOCK, MARINE AND

Line Number	Make and Model	Designed for	Number of Cylinders Bore and Stroke (In.)	Rated Hp. (A.M.A.)	Maximum Brake Hp. at Specified R.P.M.	Piston Displacement (Cu. In.)	Compression Ratio	Maximum Torque at R.P.M. (Lb. Ft.)	No. of Cylinders Cast In One Piece	Crankcase—Upper Half Integral with Cylinders	VALVES: Arrangement	Exhaust Head Material or S.A.E. No.	Max. Head Diameter (In.) Intake	Max. Head Diameter (In.) Exhaust	Min. Port Diameter (In.) Intake	Min. Port Diameter (In.) Exhaust	Lift (In.) Intake	Lift (In.) Exhaust	Stem Diameter (In.) Intake	Stem Diameter (In.) Exhaust	Seat Angle (Degrees)
1	Chris-Craft LC	M	6-3⅝x4¼		128-3300	263.2	7.50		6	In	L	Sil	1.84	1.75	1.62	1.50	.356	.356	.375	.375	30
2	Chris-Craft M	M	6-4x4¼		130-3000	320.4	6.20		6	In	L	Sil	1.84	1.75	1.62	1.50	.356	.356	.375	.375	30
3	Chris-Craft MA	M	6-4x4¼		135-3000	320.4	6.75		6	In	L	Sil	1.84	1.75	1.62	1.50	.356	.356	.375	.375	30
4	Chrysler Crown-M-2	M	6-3⅜x4½		97-3200	242.0	6.20	180-1200	6	In	L	Sil	1.53	1.46	1.50	1.37	.343	.343	.343	.343	45
5	Chrysler Ace-PC	M	6-3⅛x4⅜		75-3200	201.0	6.70	145-1200	6	In	L	Sil	1.46	1.46	1.31	1.31	.312	.312	.343	.343	45
6	Chrysler Royal-8-CV	M	8-3¼x4⅞		120-3200	324.0	6.10	260-1400	8	In	L	Sil	1.46	1.40	.937	1.25	.343	.343	.343	.343	45
7	Chrysler Majestic-Y	M	8-3½x5		152-3200	385.0	6.05	310-1600	8	In	L	CNS	1.71	1.59	1.56	1.43	.343	.343	.343	.343	45
8	Climax G4A	Tr, Ind	4-4⅛x5¼	27.2	39-1200	281.0	4.10	177-800	4	In	I	Sil	2.00	2.00	1.75	1.75	.400	.400	.375	.375	45
9	Climax G4B	Tr, Ind	4-4⅜x5¼	30.6	44-1200	316.0	4.10	205-800	4	In	I	Sil	2.00	2.00	1.75	1.75	.400	.400	.375	.375	45
10	Climax G4C	Tr, Ind	4-4½x5¼	32.4	47-1200	334.0	4.10	217-800	4	In	I	Sil	2.00	2.00	1.75	1.75	.400	.400	.375	.375	45
11	Climax H4A	Tr, Ind	4-4¾x6¼	36.1	61-1200	443.0	4.10	279-800	4	In	I	Sil	2.37	2.37	2.12	2.12	.437	.437	.437	.437	45
12	Climax H4B	Tr, Ind	4-5⅛x6¼	42.0	73-1200	516.0	4.10	342-800	4	In	I	Sil	2.37	2.37	2.12	2.12	.437	.437	.437	.437	45
13	Climax N4A	Tr, Ind	4-5¼x6½	44.0	85-1200	563.0	4.30	380-650	4	In	I	Sil	2.50	2.50	2.25	2.25	.500	.500	.562	.562	45
14	Climax N4B	Tr, Ind	4-5¾x6½	52.9	100-1200	675.0	4.30	463-650	4	In	I	Sil	2.50	2.50	2.25	2.25	.500	.500	.562	.562	45
15	Climax TU	Tr, Ind	4-5½x7	48.5	77-1200	665.0	4.10	378-650	2	Se	Sil	Sil	2.50	2.50	2.25	2.25	.312	.312	.437	.437	45
16	Climax R4U	Tr, Ind	4-6x7	57.6	97-1200	791.6	4.42	475-650	2	Se	L	Sil	2.75	2.75	2.50	2.50	.375	.375	.562	.562	45
17	Continental Y-4069	C	4-2½x3½	10.0	27-3400	68.7	6.00	49-1300	4	In	L	XCR	1.20	1.01	1.06	.875	.246	.246	.314	.312	(h)
18	Continental Y-4091	C	4-2⅞x3½	13.2	36-3300	90.9	6.00	66-1300	4	In	L	XCR	1.20	1.01	1.06	.875	.246	.246	.314	.312	(h)
19	Continental F-4124	C, T	4-3x4⅜	14.4	47-3300	123.7	6.00	94-1600	4	In	L	XCR	1.51	1.32	1.37	1.18	.281	.280	.341	.339	(h)
20	Continental F-4140	C, T	4-3 3/16x4⅜	16.3	52-3250	139.7	6.00	106-1600	4	In	L	XCR	1.51	1.32	1.37	1.18	.281	.280	.341	.339	(h)
21	Continental F-4162	C, T	4-3 7/16x4⅜	18.9	58-3300	162.4	5.75	122-1600	4	In	L	XCR	1.51	1.32	1.37	1.18	.281	.280	.341	.339	(h)
22	Continental DS (1) 6202	T, Tr	6-3⅛x4⅜	23.4	70-3200	201.3	5.50	152-1200	6	In	I	Sil	1.54	1.20	1.37	1.06	.390	.390	.373	.371	(h)
23	Continental F-6170	C, T	6-3x4	21.6	65-3500	169.6		124-1200	6	In	L	XCR	1.51	1.20	1.37	1.06	.284	.284	.341	.339	(h)
24	Continental F-6199	C, T	6-3¼x4	25.4	68-3400	199.1		150-1200	6	In	L	XCR	1.51	1.32	1.37	1.18	.284	.284	.341	.339	(h)
25	Continental F-6209	C, T	6-3 3/16x4⅜	24.4	71-3100	209.5		154-1200	6	In	L	XCR	1.51	1.20	1.37	1.06	.284	.284	.341	.339	(h)
26	Continental F-6218	C, T	6-3¼x4⅜	25.4	73-3100	217.8		161-1250	6	In	L	XCR	1.51	1.32	1.37	1.18	.284	.284	.341	.339	(h)
27	Continental A-6244	T, B	6-3 7/16x4⅜	28.3	83-3250	243.6	5.40	171-1200	6	In	L	XCR	1.57	1.42	1.43	1.31	.311	.311	.339	.338	(h)
28	Continental M-6271	T, B	6-3⅝x4⅜	31.5	84-2900	270.9	5.75	192-1200	6	In	L	XCR	1.76	1.51	1.62	1.37	.375	.375	.404	.402	(h)
29	Continental M-6290	T, B	6-3¾x4⅜	33.7	88-2800	289.9	5.50	206-1200	6	In	L	XCR	1.76	1.51	1.62	1.37	.375	.375	.404	.402	(h)
30	Continental M-6230	T, B	6-4x4⅜	38.4	98-2800	329.9	5.50	233-1200	6	In	L	XCR	1.76	1.51	1.62	1.37	.375	.375	.404	.402	(h)
31	Continental E-600	T, B	6-3 11/16x4½	32.6	78-2650	288.3	5.43	192-900	6	In	L	CNS	2.06	1.87	1.81	1.62	.406	.378	.434	.432	30
32	Continental E-601	T, B	6-3⅞x4½	36.0	86-2600	318.4	5.47	214-900	6	In	L	CNS	2.06	1.87	1.81	1.62	.406	.378	.434	.432	30
33	Continental E-602	T, B	6-4⅛x4½	40.8	95-2550	360.0	5.40	252-900	6	In	L	CNS	2.06	1.87	1.81	1.62	.406	.378	.434	.432	30
34	Continental E-603	T, B	6-4¼x4½	43.3	98-2400	383.0	5.29	265-1000	6	In	L	CNS	2.06	1.87	1.81	1.62	.406	.378	.434	.432	30
35	Continental 20-R	T, B	6-4⅛x4¾	40.8	106-2600	380.9	4.75	276-1200	6	In	I	CNS	2.06	1.87	1.81	1.62	.420	.420	.434	.433	30
36	Continental 21-R	T, B	6-4⅜x4¾	45.9	118-2550	428.4	4.63	308-1200	6	In	I	CNS	2.06	1.87	1.81	1.62	.420	.420	.434	.433	30
37	Continental 22-R	T, B	6-4½x5¼	48.6	138-2400	501.0	4.50	364-1200	6	In	I	CNS	2.06	1.87	1.81	1.62	.420	.420	.434	.433	30
38	Dodge RC-RD	T	6-3⅜x4 1/16	27.3	75-3000	218.0	6.50	155-1200	6	In	L	Sil	1.65	1.53	1.50	1.37	.343	.343	.340	.340	45
39	Dodge RE	T	6-3⅜x4 1/16	27.3	73-3000	218.0	5.80	150-1200	6	In	L	Sil	1.65	1.53	1.50	1.37	.343	.343	.340	.340	45
40	Dodge RF	T	6-3⅜x4¼	27.3	78-3000	228.1	5.80	158-1200	6	In	L	Sil	1.65	1.53	1.50	1.37	.343	.343	.340	.340	45
41	Dodge RG-RH	T	6-3⅜x4½	27.3	85-3000	241.5	5.60	175-1200	6	In	L	CNT	1.65	1.53	1.50	1.37	.343	.343	.340	.340	45
42	Dodge RK-RL-RO-RP	T	6-3¾x5	33.7	100-2800	331.3	5.20	230-800	6	In	L	CNT	1.93	1.75	1.78	1.59	.312	.312	.371	.371	45
43	Elco F-42	M	4-5x6	40.0	90-1600	471.0	5.00	325-1050	2	Se	F	Sil	2.50	2.50			.303	.350	.437	.437	45
44	Elco F-6	M	6-4¾x6	54.1	120-1600	638.0	4.71	431-1000	2	Se	F	Sil	2.50	2.50			.303	.350	.437	.437	45
45	Elco F-62	M	6-5x6	60.0	145-1600	707.0	5.00	490-1050	2	Se	F	Sil	2.50	2.50			.303	.350	.437	.437	45
46	Fay & Bowen Gobest LN-403	M	4-3x4		20-1800	113.0			4	In	L	CNS									
47	Fay & Bowen LC-41	M	4-3½x4½		27-1600	173.0			4	In	L	CNS									
48	Fay & Bowen Rocket	M	4-2⅞x3½		35-3200	90.0			4	Se	I	CNS									
49	Fay & Bowen LN-43	M	4-4¾x5½		40-1000	389.8			4	Se	L	CNS									
50	Fay & Bowen LC-61	M	6-3½x4½		55-2000	259.7			6	In	L	CNS									
51	Fay & Bowen LNS-43	M	4-4¾x5½		60-1400	398.8			4	Se	L	CNS									
52	Fay & Bowen Challenger	M	6-3⅜x4		60-2800	215.0			6	In	L	CNS									
53	Fay & Bowen B	M	6-3¾x5		70-2200	331.5			6	In	L	CNS									
54	Fay & Bowen Conqueror	M	6-4½x4¾		100-2100	453.0			3	Se	L	CNS									
55	Ford V-85	T	8-3.06x3.75	30.0	85-3800	221.0	6.12	149-2000	8	In	L	CNA	1.53	1.53			.292	.292	.310	.310	45
56	Ford V-60	T	8-2.60x3.20	21.6	60-3500	136.0	6.60	94-2500	8	In	L	CNA	1.28	1.28			251	251	278	278	45
57	Franklin 4A-267	T, B, Tr, Ind	4-4⅛x5	27.4	71-2350	267.0	4.90	162-1100	1	Se	I	CNS	1.75	1.43	1.62	1.31	.375	.375	.375	.375	60
58	Franklin 6AH-377	T, B, Tr, Ind	6-4x5	38.4	104-2500	377.0	4.90	250-1500	1	Se	I	CNS	1.75	1.43	1.62	1.31	.375	.375	.375	.375	30
59	Franklin 6A-377	T, B, Tr, Ind	6-4x5	38.4	104-2500	377.0	4.90	250-1500	1	Se	I	CNS	1.75	1.43	1.62	1.31	.375	.375	.375	.375	30
60	Franklin 6AH-400	T, B, Tr, Ind	6-4⅛x5	40.8	110-2500	400.0	5.00	268-1500	1	Se	I	CNS	1.75	1.43	1.62	1.31	.375	.375	.375	.375	30
61	Franklin 6A-400	T, B, Tr, Ind	6-4⅛x5	40.8	110-2500	400.0	5.00	268-1500	1	Se	I	CNS	1.75	1.43	1.62	1.31	.375	.375	.375	.375	30
62	Franklin CHO-150	T, Tr	4-3⅝x3⅝		43-3000	150.0	5.50	100-1200	1	Se	I	CNS	1.66	1.51	1.50	1.40	.375	.375	.375	.375	30
63	G. M. C. 223	T	6-3 7/16x4	28.4	81-3400	222.7	6.20	163-1200	6	In	L	SCN	1.59	1.46			.296	.296			(h)
64	G. M. C. 230	T	6-3 7/16x4⅛	28.4	86-3500	229.7	6.20	172-1200	6	In	L	Sil	1.56	1.42			.311	.309	.343	.343	(h)
65	G. M. C. 239	T, B	6-3 5/16x4⅝	26.3	81-3000	238.9	5.10	175-800	6	Se	I	BM	1.56	1.56			.328	.328	.375	.375	45
66	G. M. C. 257	T, B	6-3 7/16x4⅝	28.3	87-2800	257.5	5.00	190-(aa)	6	Se	I	BM	1.56	1.56			.328	.328	.375	.375	45
67	G. M. C. 286	T, B	6-3⅝x4⅝	31.5	92-2900	286.4	4.90	205-(bb)	6	Se	I	BM	1.56	1.56			.328	.328	.375	.375	45
68	G. M. C. 331	T, B	6-3¾x5	33.7	97-2800	331.4	4.74	230-(cc)	6	Se	I	BM	1.50	1.50			.328	.328	.375	.375	30
69	G. M. C. 400	T, B	6-4⅛x5	40.9	111-2500	400.9	4.75	296-(aa)	6	Se	I	BM	1.50	1.50			.328	.328	.375	.375	30
70	G. M. C. 450	T, B	6-4⅜x5	45.9	128-2600	450.9	4.73	340-(dd)	6	Se	I	BM	1.50	1.50			.390	.390	.375	.375	30
71	Gray Phantom 6-125	M	6-3 7/16x4⅜		125-3600	244.0			6	In	L	Sil	1.56	1.42	1.43	1.37					(h)
72	Gray Fireball 6-140	M	6-3 7/16x4⅜		140-4000	244.0			6	In	L	Sil	1.56	1.42	1.43	1.37					(h)
73	Gray Phantom 6-103	M	6-3¼x4⅜		103-3600	218.0			6	In	L	Sil	1.51	1.32	1.37	1.18					(h)
74	Gray Six-S1	M	6-3¼x4		73-3200	199.0			6	In	L	Sil	1.51	1.32	1.37	1.18					(h)
75	Gray Eight-135	M	8-3 7/16x4½			334.0			8	In	L	Sil									
76	Gray Eight-160	M	8-3⅝x4½		160-3200	372.0			8	In	L	Sil									
77	Gray Six-91	M	6-3 7/16x4⅜		100-3000	244.0	5.40		6	In	L	Sil	1.56	1.42	1.43	1.37	.312	.312			(h)
78	Gray Super Six-117	M	6-3 7/16x4⅜		117-3200	244.0			6	In	L	Sil	1.56	1.42	1.43	1.37	.312	.312			(h)
79	Gray Phantom 4-75	M	4-3 7/16x4⅜		75-3600	162.4			4	In	L	AUS	1.51	1.32	1.37	1.18	.281	.281			(h)
80	Gray Sea Scout 4	M	4-2½x3½		16-1800	69.0			4	In	L	Sil	1.20	1.01	1.06	.875	.296	.296			(h)
81	Gray Six-105	M	6-4¼x4½		101-2400	383.0			6	In	L	Sil	2.06	1.87	1.81	1.62	.406	.406			30
82	Gray Six-95	M	6-3⅞x4½		91-2600	318.4			6	In	L	Sil	2.06	1.87	1.81	1.62	.406	.406			30
83	Gray Phantom 4-45	M	4-2⅞x3½		45-3600	91.0			4	In	L	Sil	1.20	1.01	1.06	.875	.312	.312			(h)
84	Gray 4-40	M	4-3⅜x4		50-3000	143.0			4	In	L	Sil	1.51	1.26	1.37	1.12	.328	.328			(h)
85	Gray Four-52	M	4-3 7/16x4⅜		57-2600	162.4	6.00		4	In	L	AUS	1.51	1.32	1.37	1.18	.281	.281			(h)
86	Gray Six-101	M	6-3¾x4⅜		101-3000	290.0	5.50		6	In	L	AUS									
87	Gray SN-121	M	6-4x4⅜		111-3000	330.0	5.50		6	In	L	AUS									
88	Gray Phantom 4-62	M	4-3 3/16x4⅜		62-3600	140.0			4	In	L	AUS	1.51	1.32	1.37	1.18					(h)
89	Gray Four-22	M	4-2⅞x3½		37-3000	91.0			4	In	L	Sil	1.20	1.01	1.06	.875	.296	.296			(h)
90	Gray Phantom 6-90	M	6-3¼x4		90-3600	199.0			6	In	L	Sil	1.51	1.32	1.37	1.18					(h)
91	Gray Six-71	M	6-3¼x4⅜		83-3200	218.0			6	In	L	Sil	1.51	1.32	1.37	1.18					(h)
92	Gray Fireball 6-160	M	6-3 7/16x4⅜		160-4000	244.0			6	In	L	Sil	1.56	1.42	1.43	1.37					(h)
93	Hall-Scott 230-231	M, Ind	6-5½x7	72.6	245-1800	997.8	4.90	745-1400	6	Se	I	AESW	2.73	2.73			.406	.406	.435	.435	30
94	Hall-Scott Explorer 132-33, 157-58	M	6-5x7	60.0	190-1800	824.7	4.85	593-1400	6	Se	I	AESW	2.73	2.73			.406	.406	.435	.435	30
95	Hall-Scott Invader 168-169	M	6-5½x7	72.6	265-2100	997.8	4.95	754-1400	6	In	I	AESW	2.87	2.87			.484	.484	.497	.528	30
96	Hall-Scott Fisher Jr. 178-179	M	4-4¼x5½	28.9	70-1800	312.0	4.03	213-1300	4	Se	I	Sil	2.13	2.13	1.93	1.93	.343	.343	.435	.435	45
97	Hall-Scott Navigator 1-116-117	M	6-4¼x5½	43.3	103-1800	468.0	4.74	333-1200	6	Se	I	Spec	2.25	2.25	1.93	1.93	.312	.312	.435	.435	45

For abbreviations see pages 292 and 293

COMMERCIAL VEHICLE ENGINES—*Continued*

Front End Drive—Type	Pistons: Material	Pistons: Length (In.)	Pistons: Weight (with Pins, Rings and Bushing)—(Oz.)	Pistons: Piston Pin—Diameter and Length (In.)	Number of Rings per Piston	Connecting Rods: Material	Connecting Rods: Center to Center Length (In.)	Connecting Rods: Weight—With Bushing and Cap (Oz.)	Crankshaft: Material	Crankshaft: Counterbalances Used	Crankshaft: Crank-pin Diameter and Length (In.)	Crankshaft: Main Bearings Number	Crankshaft: Main Bearings Diameter and Length (In.) Front	Crankshaft: Main Bearings Diameter and Length (In.) Rear	Oil Pressure To	Spark Plug: Recommended Make	Spark Plug: Thread Size	Carburetor: Make	Carburetor: Size	Adapted for Use of Kerosene or Distillate	Weight (without Carburetor or Ignition)—Lb.	Overall Dimensions (In.): Width	Overall Dimensions (In.): Height	Overall Dimensions (In.): Length	Line Number
HI	Al	4.18	.....	1.00x3.18	4	AS	8	......	CS	N	2.00x1.50	7	2.50x2.12	2.50x1.37	ab	CH	14 mm.	Zen(2)	1½†	No	790	24⅛	27⅞	46 7/16	1
HI	Al	4.18	.....	1.00x3.50	4	AS	8	......	CS	N	2.00x1.50	7	2.50x2.12	2.50x1.37	ab	CH	14 mm.	Zen	1¾†	No	825	24⅛	27⅞	46 7/16	2
HI	Al	4.18	.....	1.00x3.50	4	AS	8	......	CS	N	2.00x1.50	7	2.50x2.12	2.50x1.37	ab	CH	14 mm.	Zen	1¾†	No	795	24⅛	27⅞	46 7/16	3
HI	Al	3.87	25.0	.859x2.87	4	AS	8¾	33	CS	Y	2.12x1.37	4	2.50x1.87	2.50x1.62	abcm	CH	18 mm.	Zen	1½†	No	785§	24	25⅛	45	4
HI	Al	3.68	21.0	.859x2.62	4	AS	7 11/16	31	CS	Y	1.93x1.25	4	2.25x1.87	2.25x1.68	abcem	CH	18 mm.	Zen	1⅛†	No	665§	24	23¼	43	5
HI	Al	3.87	23.0	.859x2.75	4	AS	9	36	CS	Y	2.18x1.37	5	2.70x2.09	2.70x1.78	abcm	CH	18 mm.	Zen(2)	1¼†	No	990§	27	28¼	54 9/16	6
HI	Al	4.12	30.0	.859x3.00	5	AS	10	41	CS	Y	2.18x1.37	9	2.75x3.25	2.75x1.87	abcem	CH	18 mm.	Zen(2)	1½†	No	1230§	26½	32	59 3/16	7
HI	CI	4.87	70.0	1.31x3.81	4	CS	10½	86	CS	N	2.37x2.12	3	2.37x2.12	2.37x2.75	abcde	CH	⅞-18	Zen	1¼	D	825	25¾	37	41¼	8
HI	CI	4.87	80.0	1.31x4.12	4	CS	10½	86	CS	N	2.37x2.12	3	2.37x2.12	2.37x2.75	abcde	CH	⅞-18	Zen	1¼	D	825	25¾	37	41¼	9
HI	CI	4.87	86.0	1.31x4.25	4	CS	10½	86	CS	N	2.37x2.12	3	2.37x2.12	2.37x2.75	abcde	CH	⅞-18	Zen	1¼	D	825	25¾	37	41¼	10
HI	CI	5.87	120.0	1.50x4.00	4	CS	11¾	139	CS	N	2.75x2.50	3	3.00x2.87	3.00x3.62	abcde	CH	⅞-18	Zen	1½	D	1350	28¾	42⅛	47¾	11
HI	CI	5.87	142.0	1.50x4.31	4	CS	11¾	139	CS	....	2.75x2.50	3	3.00x2.87	3.00x3.62	abcde	CH	⅞-18	Zen	1½	D	1350	28¾	42⅝	47¾	12
HI	CI	6.75	162.0	1.48x4.75	4	CS	14	194	CS	....	3.00x3.00	3	3.25x4.00	3.25x4.37	abce	CH	⅞-18	Zen	1¾	D	1800	30½	46	53¼	13
HI	CI	6.75	189.0	1.48x5.25	4	CS	14	194	CS	N	3.00x3.00	3	3.25x4.00	3.25x4.37	abce	CH	⅞-18	Zen	1¾	D	1800	30½	46	53¼	14
Sp	CI	7.00	168.0	1.50x5.18	4	CS	14	179	CNS	N	2.50x3.50	3	2.50x3.75	2.50x4.43	abce	CH	⅞-18	Zen	1¾	No	1550	26	43⅜	55⅝	15
HI	CI	6.94	210.0	1.48x5.37	4	CS	16	244	CNS	N	3.00x3.50	3	3.25x3.75	3.25x4.50	abce	CH	⅞-18	Zen	2	No	......	30 15/16	46½	57 9/16	16
HI	CI	2.87	.....	.703x2.43	3	CS	5¾	......	CS	N	1.50x1.18	3	1.75x1.37	1.75x1.78	abce	....	18 mm.	....	⅞	No	......	26	22 15/16	27¼	17
HI	CI	2.87	.....	.703x2.43	3	CS	5¾	......	CS	N	1.50x1.18	3	1.75x1.37	1.75x1.78	abce	....	18 mm.	....	⅞	No	......	26	22 15/16	27¼	18
HI	CI	3.56	.....	.859x2.68	4	CS	7	......	CS	N	1.93x1.31	3	2.25x1.18	2.25x1.89	abce	....	18 mm.	....	1¼	No	......	26	26 11/32	29	19
HI	CI	3.56	.....	.859x2.68	4	CS	7	......	CS	N	1.93x1.31	3	2.25x1.18	2.25x1.89	abce	....	18 mm.	....	1¼	No	......	26	26 11/32	29	20
HI	CI	3.56	.....	.859x2.68	4	CS	7	......	CS	N	1.93x1.31	3	2.25x1.18	2.25x1.89	abce	....	18 mm.	....	1¼	No	......	26	26 11/32	29	21
HI	CI	3.56	.....	.859x2.62	4	CS	7	......	CS	Y	1.93x1.31	4	2.25x1.21	2.25x1.81	abcefg	....	18 mm.	....	1¼	K-D	......	26	31	36 9/32	22
Ch	CI	3.75	.....	.859x2.49	4	CS	7	......	CS	Y	1.93x1.31	4	2.25x1.21	2.25x1.81	abce	....	18 mm.	....	1¼	No	......	26	27¼	36 1/32	23
Ch	CI	3.75	.....	.859x2.68	4	CS	7	......	CS	Y	1.93x1.31	4	2.25x1.21	2.25x1.81	abce	....	18 mm.	....	1¼	No	......	26	27¼	36 1/32	24
Ch	CI	3.56	.....	.859x2.68	4	CS	7	......	CS	Y	1.93x1.31	4	2.25x1.21	2.25x1.81	abce	....	18 mm.	....	1¼	No	......	26	27¼	36 1/32	25
Ch	CI	3.56	.....	.859x2.68	4	CS	7	......	CS	Y	1.93x1.31	4	2.25x1.21	2.25x1.81	abce	....	18 mm.	....	1¼	No	......	26	27¼	36 1/32	26
Ch	Al	3.93	.....	.859x2.87	4	CS	8⅜	......	CS	Y	2.12x1.37	4	2.37x1.43	2.37x2.06	abce	....	18 mm.	....	1½	No	......	26	28 11/16	36¾	27
HI	CI	4.75	.....	1.10x3.06	4	CS	8⅜	......	CS	Y	2.37x1.56	7	2.62x1.56	2.62x2.15	abce	....	18 mm.	....	1½	No	......	25¾	29½	41 13/32	28
HI	CI	4.75	.....	1.10x3.06	4	CS	8⅜	......	CS	Y	2.37x1.56	7	2.62x1.56	2.62x2.15	abce	....	18 mm.	....	1½	No	......	25¾	29½	41 13/32	29
HI	CI	4.75	.....	1.10x3.06	4	CS	8⅜	......	CS	Y	2.37x1.56	7	2.62x1.56	2.62x2.15	abce	....	18 mm.	....	1½	No	......	25¾	29½	41 13/32	30
HI	CI	5.31	.....	1.25x3.08	4	CS	9	......	CS	Y	2.37x1.81	7	2.62x1.65	2.62x2.65	abcef	....	18 mm.	....	1½	No	......	25¾	32 7/32	42 25/32	31
HI	CI	5.31	.....	1.25x3.08	4	CS	9	......	CS	Y	2.37x1.81	7	2.62x1.65	2.62x2.65	abcef	....	18 mm.	....	1½	No	......	25¾	32 7/32	42 25/32	32
HI	CI	5.31	.....	1.25x3.43	4	CS	9	......	CS	Y	2.37x1.81	7	2.62x1.65	2.62x2.65	abcef	....	18 mm.	....	1½	No	......	25¾	32 7/32	42 25/32	33
HI	CI	5.31	.....	1.25x3.43	4	CS	9	......	CS	Y	2.37x1.81	7	2.62x1.65	2.62x2.65	abcef	....	18 mm.	....	1¾	No	......	25¾	32 7/32	42 25/32	34
Ch	Al	5.31	.....	1.25x3.43	4	CS	9½	......	CV	N	2.50x1.81	7	2.75x1.75	2.75x2.81	abcefg	....	18 mm.	....	1¾	No	......	25¾	36 35/64	55 5/16	35
Ch	Al	5.31	.....	1.25x3.68	4	CS	9½	......	CV	N	2.50x1.81	7	2.75x1.75	2.75x2.81	abcefg	....	18 mm.	....	1¾	No	......	25¾	36 25/32	55 5/16	36
Ch	Al	5.93	.....	1.50x3.71	4	CS	10½	......	CV	Y	2.75x1.81	7	2.75x1.75	2.75x2.81	abcefg	....	18 mm.	....	1¾&2	No	......	25¾	39⅝	55 5/16	37
Ch	Al	3.87	.....	.859x2.87	4	AS	8 3/32	32.2	CS	Y	2.12x1.21	4	2.50x1.31	2.50x1.87	abce	CH	14 mm.	Car	1¼	No	593	23¾	33½	39 13/16	38
Ch	Al	3.87	.....	.859x2.87	4	AS	8 3/32	32.2	CS	Y	2.12x1.21	4	2.50x1.31	2.50x1.87	abce	CH	14 mm.	Car	1¼	No	597	23¾	33½	39 13/16	39
Ch	Al	3.87	.....	.859x2.87	4	AS	8	......	CS	Y	2.12x1.21	4	2.50x1.31	2.50x1.87	abce	CH	14 mm.	Car	1½	No	597	23¾	33½	39 13/16	40
Ch	Al	3.87	.....	.859x2.87	4	AS	7⅞	31.8	CS	Y	2.12x1.21	4	2.50x1.31	2.50x1.87	abce	CH	14 mm.	Car	1½	No	612	23¾	33½	39 13/16	41
Ch	Als	4.56	.....	1.12x3.25	4	AS	10 7/16	......	CS	Y	2.31x1.43	7	3.00x1.87	3.00x3.04	abce	CH	14 mm.	Zen	1½	No	1062	24¾	36 3/16	49 17/32	42
HI	Als	6.12	77.0	1.37x4.17	4	CS	12¾	132.0	CNS	Y	2.37x3.00	3	2.62x3.31	2.62x4.00	abcdeg	AC	⅞-18	Zen	1½†	No	1450	27	37 11/16	70 11/16	43
HI	Als	6.12	77.0	1.37x4.00	4	CS	12¾	132.0	CNS	Y	2.37x3.00	4	2.62x3.31	2.62x4.00	abcdeg	AC	⅞-18	Str	1½	No	1750	27	37 11/16	85 1/16	44
HI	Als	6.12	77.0	1.37x4.17	4	CS	12¾	132.0	CNS	Y	2.37x3.00	4	2.62x3.31	2.62x4.00	abcdeg	AC	⅞-18	Zen	1½†	No	1900	27	37 11/16	87 5/16	45
Ch	CI	.....	.....	....	...	AS	......	......	CNS	N	....	..	....	....	abcde	....	....	....	......	No	......	......	......	......	46
Ch	Al	.....	.....	....	...	AS	......	......	CNS	N	....	..	....	....	abcde	....	....	....	......	No	......	......	......	......	47
Ch	Al	.....	.....	....	...	AS	......	......	CNS	N	....	..	....	....	abcde	....	....	....	......	No	......	......	......	......	48
Ch	CI	.....	.....	....	...	AS	......	......	CNS	N	....	..	....	....	abcde	....	....	....	......	No	......	......	......	......	49
Ch	CI	.....	.....	....	...	AS	......	......	CNS	N	....	..	....	....	abcde	....	....	....	......	No	......	......	......	......	50
Ch	CI	.....	.....	....	...	AS	......	......	CNS	N	....	..	....	....	abcde	....	....	....	......	No	......	......	......	......	51
Ch	Al	.....	.....	....	...	AS	......	......	CNS	Y	....	..	....	....	abcde	....	....	....	......	No	......	......	......	......	52
Ch	CI	.....	.....	....	...	AS	......	......	CNS	Y	....	..	....	....	abcde	....	....	....	......	No	......	......	......	......	53
Ch	CI	.....	.....	....	...	AS	......	......	CNS	Y	....	..	....	....	abcde	....	....	....	......	No	......	......	......	......	54
HI	AS	.....	14.53	.750x2.85	3	CMS	7	15.9	CAS	Y	2.00x1.93	3	2.40x1.56	2.40x2.25	abce	CH	18 mm.	Str	.97	No	588*	23 13/32	31¼	42 25/32*	55
HI	AS	.....	10.67	.687x2.36	3	CMS	6⅛	9.50	CAS	Y	1.60x1.54	3	2.00x1.50	2.00x2.00	abce	CH	14 mm.	Str	.78	No	400*	24 25/32	32 19/64	43⅝*	56
HI	Al	4.37	38.0	1.25x3.12	5	AS	9½	54.0	CS	....	2.37x1.75	5	2.70x2.25	2.70x2.87	abcdeg	CH	18 mm.	Zen	1¼	No	829	24½	37	38 9/16	57
HI	Al	4.37	36.0	1.25x3.12	5	AS	9½	54.0	CS	....	2.37x1.75	7	2.70x2.25	2.70x2.87	abcdefg	CH	18 mm.	Zen	1½	No	1247	40⅛	27¾	44	58
HI	Al	4.37	36.0	1.25x3.12	5	AS	9½	54.0	CS	....	2.37x1.75	7	2.70x2.25	2.70x2.87	abcdeg	CH	18 mm.	Zen	1½	No	1087	24½	37 1/16	44	59
HI	Al	4.37	38.0	1.25x3.12	5	AS	9½	54.0	CS	....	2.37x1.75	7	2.70x2.25	2.70x2.87	abcdefg	CH	18 mm.	Zen	1½	No	1247	40⅛	27¾	44	60
HI	Al	4.37	38.0	1.25x3.12	5	AS	9½	54.0	CS	....	2.37x1.75	7	2.70x2.25	2.70x2.87	abcdefg	CH	18 mm.	Zen	1½	No	1087	24½	37 1/16	44	61
HI	Al	3.21	18.0	.859x3.12	5	AS	7	74.0	CS	Y	1.93x1.00	3	2.25x1.25	2.25x1.50	ace	CH	14 mm.	Op	1&1¼	No	290	34	18½	18	62
Ch	CNI	.....	.....	.937x3.06	4	CS	7 1/16	......	CS	Y	2.00x1.31	4	2.37x1.81	2.50x1.87	abcde	AC	14 mm.	Zen	1¼	No	590	......	......	......	63
Ch	Al	.....	.....	.859x3.15	4	CS	7 11/16	......	CS	Y	2.12x1.14	4	2.00x1.15	1.81x1.40	abcde	AC	14 mm.	Zen	1¼	No	540	......	......	......	64
HI	Al	.....	.....	.937x....	4	CS	10	......	CS	Y	2.12x1.50	4	2.37x2.12	2.37x2.46	abcdg	AC	14 mm.	ZS	1⅜	No	650	......	......	46⅝	65
HI	Al	.....	.....	.937x....	4	CS	10	......	CS	Y	2.12x1.50	4	2.37x2.12	2.37x2.46	abcdg	AC	14 mm.	ZS	1⅜	No	656	......	......	46⅝	66
HI	Al	.....	.....	.937x....	4	CS	10	......	CS	Y	2.12x1.50	4	2.37x2.12	2.37x2.46	abcdg	AC	14 mm.	ZS	1⅜	No	656	......	......	46⅝	67
HI	Al	.....	.....	1.12x....	4	CS	11¼	......	CNS	Y	2.37x1.75	4	2.50x2.43	2.50x2.71	abdg	AC	14 mm.	ZS	......	No	900	......	......	48⅞	68
HI	Al	.....	.....	1.25x....	4	CS	11¼	......	CNS	Y	2.62x1.34	4	2.70x2.34	2.70x2.62	abdg	AC	14 mm.	ZS	......	No	980	......	......	48⅞	69
HI	Al	.....	.....	1.37x....	4	CS	11¼	......	CNS	....	2.62x1.34	4	2.70x2.31	2.70x2.62	abdg	AC	14 mm.	Str	......	No	1025	......	......	48⅞	70
Ch	Al	3.93	.....	.859x....	4	......	8⅜	......	CS	Y	2.12x1.37	4	2.37x2.06	2.37x1.43	abce	CA	....	Zen	....†	No	685§	25	20 1/16	43 1/16	71
Ch	Al	3.93	.....	.859x....	4	CS	8⅜	......	CS	Y	2.12x1.37	4	2.37x2.06	2.37x1.43	abce	CA	18 mm.	Str(2)	....†	No	675§	25	20 1/16	43 1/16	72
Ch	Al	3.56	.....	.859x....	4	......	7	......	CS	Y	1.93x1.31	4	2.25x1.71	2.25x1.21	abce	CA	18 mm.	Zen	....†	No	......	22½	19 1/16	39⅝	73
Ch	CI	3.75	.....	.859x....	4	......	7	......	CS	Y	1.93x1.31	4	2.25x1.71	2.25x1.21	abce	CA	18 mm.	Zen	....†	No	650§	17 1/16	16⅝	42⅞	74
HI	Al	.....	.....	....	4	......	......	......	CNS	....	....	5	2.62x....	2.62x....	abce	CA	18 mm.	Zen(2)	....†	No	1200§	25¾	20⅛	57⅝	75
HI	Al	.....	.....	....	4	......	......	......	CS	....	....	5	2.62x....	2.62x....	abce	CA	18 mm.	Str	....†	No	1275§	25¾	20⅛	59⅝	76
Ch	Al	3.93	.....	.859x....	4	......	8⅜	......	CNS	Y	2.12x1.37	4	2.37x2.06	2.37x1.43	abce	CA	14 mm.	Zen	1½†	No	799§	19⅞	17⅛	49 1/16	77
Ch	Al	3.93	.....	.859x....	4	......	8⅜	......	CNS	Y	2.12x1.37	4	2.37x2.06	2.37x1.43	abce	CA	14 mm.	Zen(2)	1½†	No	715§	25¾	17¼	45½	78
HI	Al	2.87	.....	.859x....	4	......	7	......	CS	N	1.93x1.31	3	2.25x1.89	2.25x1.18	abce	CA	14 mm.	Zen	....†	No	420§	20¼	18½	33	79
HI	CI	2.87	.....	.703x....	3	......	5¾	......	CNS	N	1.50x1.18	3	1.75x1.78	1.75x1.37	abce	AC	14 mm.	Zen	....†	No	377§	16	18¼	31½	80
HI	CI	5.31	.....	1.25x....	4	CS	9	......	CNS	N	2.37x1.68	7	2.62x2.65	2.62x1.65	abce	CA	18 mm.	Str	....†	No	1250§	22	20⅜	55⅝	81
HI	CI	5.31	.....	1.25x....	4	CS	9	......	CNS	N	2.37x1.68	7	2.62x2.65	2.62x1.65	abce	CA	18 mm.	Str	....†	No	1180§	22	20⅜	55⅝	82
HI	Al	2.87	.....	.703x....	3	......	5¾	......	CS	N	1.50x....	3	1.75x1.78	1.75x1.37	abce	CA	14 mm.	Zen	....†	No	300§	17⅜	16	30	83
Ch	CI	4.00	.....	.859x....	4	......	7	......	CS	N	1.75x1.37	3	1.75x1.78	1.75x1.39	abce	CA	18 mm.	Zen	....†	No	510§	17 5/16	15⅜	36	84
HI	CI	2.87	.....	.859x....	4	......	7	......	CS	N	1.93x1.31	3	2.25x1.89	2.25x1.18	abce	CA	14 mm.	Zen	....†	No	540§	18 7/16	14⅛	35⅛	85
HI	CI	.....	.....	1.10x3.06	4	......	8⅜	......	CNS	Y	....	7	2.62x1.56	2.62x2.15	abce	AC	18 mm.	Zen	1½†	No	......	......	18	49⅜	86
HI	CI	.....	.....	1.10x3.06	4	......	8⅜	......	CNS	Y	2.37x1.56	7	2.62x1.56	2.62x2.15	abce	AC	18 mm.	Zen	1¾†	No	......	......	18	49⅜	87
HI	Al	2.68	.....	.859x....	4	......	7	......	CS	N	1.93x1.31	3	2.25x1.89	2.25x1.18	abce	CA	14 mm.	Zen	....†	No	......	20¼	18½	33	88
HI	CI	2.87	.....	.703x....	3	......	5¾	......	CS	N	1.50x....	3	1.75x1.78	1.75x1.37	abce	CA	14 mm.	Zen	....†	No	375§	15	12½	31½	89
Ch	Al	3.75	.....	.859x....	4	......	7	......	CS	Y	1.93x1.31	4	2.25x1.71	2.25x1.21	abce	CA	18 mm.	Zen	....†	No	560§	20	19 5/16	39⅝	90
Ch	CI	3.56	.....	.859x....	4	......	7	......	CS	Y	1.93x1.31	4	2.25x1.71	2.25x1.21	abce	CA	18 mm.	Zen	....†	No	665§	17 7/16	16⅝	42⅞	91
Ch	Al	3.93	.....	.859x....	4	CS	8⅜	......	CS	Y	2.12x1.37	4	2.37x2.06	2.37x1.43	abce	CH	14 mm.	Zen(3)	....†	No	665§	30	23	42 11/16	92
Ch	Al	6.62	.....	1.37x4.69	5	AS	11	97.5	4140	Y	2.37x2.00	7	2.75x2.43	2.75x4.56	abcefg	CH	18 mm.	Zen	2	No	......	31½	42	90 3/16	93
Ch	Al	4.92	78.5	1.25x4.00	4	AS	11	97.5	4140	Y	2.37x2.00	7	2.75x2.43	2.75x4.56	abcefg	CH	18 mm.	Zen	2	No	2820§	31½	42	90 3/16	94
Ch	Al	6.46	108.0	1.37x4.40	5	AS	11	114.5	4140	Y	2.50x2.12	7	2.75x1.93	2.75x1.93	abcefg	CH	18 mm.	Zen	2	No	2015§	25 1/32	39⅝	74 3/16	95
HC	Al	5.03	57.0	1.25x3.25	6	AS	11	103.0	CNS	N	2.25x2.00	3	2.75x2.31	2.75x2.31	abceg	CH	18 mm.	Zen	1½	D	1905§	24⅝	41⅜	76 7/16	96
HC	Al	4.56	52.0	1.25x3.59	6	AS	11	104.0	4140	N	2.25x2.00	4	2.75x2.18	2.75x3.18	abcefg	CH	18 mm.	Zen	1¾	No	2120§	23⅛	42	99 11/16	97

For abbreviations see pages 292 and 293

AMERICAN STOCK, MARINE AND

Line Number	MAKE AND MODEL	Designed for	Number of Cylinders Bore and Stroke (In.)	Rated Hp. (A.M.A.)	Maximum Brake Hp. at Specified R.P.M.	Piston Displacement (Cu. In.)	Compression Ratio	Maximum Torque at R.P.M. (Lb. Ft.)	No. of Cylinders Cast in One Piece	Crankcase—Upper Half Integral with Cylinders	VALVES Arrangement	VALVES Exhaust Head Material or S.A.E. No.	Max. Head Diameter (In.) Intake	Max. Head Diameter (In.) Exhaust	Min. Port Diameter (In.) Intake	Min. Port Diameter (In.) Exhaust	Lift (In.) Intake	Lift (In.) Exhaust	Stem Diameter (In.) Intake	Stem Diameter (In.) Exhaust	Seat Angle (Degrees)
1	Hall-Scott . . . Navigator 2-163-164	M	6-4¼x5½	43.3	107-2000	468.0	4.43	319-1200	6	Se	I	AESW	2.25	2.38	2.04	2.04	.328	.328	.435	.435	45
2	Hall-Scott (5) 95	T, B	6-4x5	38.4	95-2400	377.0	5.40	255-1000	6	In	I	AESW	2.03	1.91	1.87	1.65	.421	.421	.435	.434	30
3	Hall Scott (5) 130	T, B	6-4¼x5	43.3	124-2800	425.6	4.96	310-1000	6	In	I	AESW	2.28	2.16	2.12	1.90	.421	.421	.435	.434	30
4	Hall-Scott (5) 135	T, B	6-4½x5	48.6	140-2800	477.1	5.03	330-1200	6	In	I	AESW	2.28	2.16	2.12	1.90	.421	.421	.435	.434	30
5	Hall-Scott 147	T, B	6-4x5	38.4	93-2200	377.0	4.90	265-1000	6	Se	I	Sil	2.13	2.13	1.92	1.92	.312	.312	.435	.435	45
6	Hall-Scott 155	T, B	6-4¼x5½	43.3	94-2000	468.0	4.70	296-1000	6	Se	I	Spec	2.13	2.13	1.92	1.92	.312	.312	.435	.435	45
7	Hall-Scott 160	T, B	6-4¼x5½	43.3	117-2200	468.0	4.40	335-1400	6	Se	I	Spec	2.25	2.38	2.06	2.06	.343	.343	.435	.435	45
8	Hall-Scott 160-1	T, B	6-4¼x5½	43.3	108-2200	468.0	4.70	310-1200	6	Se	I	Spec	2.13	2.13	1.92	1.92	.312	.312	.435	.435	45
9	Hall-Scott 165	T, B, Ind	4-4¼x5½	28.9	72-2000	312.0	4.80	312-1100	4	Se	I	Sil	2.13	2.25	1.93	1.89	.343	.343	.435	.435	45
10	Hall-Scott 167	T, B, Ind	4-4¾x5½	36.1	80-2000	390.0	4.84	265-1000	4	Se	I	Spec	2.25	2.38	2.06	2.03	.343	.343	.435	.435	45
11	Hall-Scott 175-1	T, B, FA	6-5x6	60.0	186-2000	706.8	5.00	570-1000	6	Se	I	AESW	2.50	2.50	2.31	2.31	.406	.343	.435	.435	(h)
12	Hall-Scott 176	T, B, FA	6-5¼x6	66.1	191-1800	779.3	4.95	630-1000	6	Se	I	AESW	2.50	2.50	2.31	2.31	.406	.343	.435	.435	(h)
13	Hall-Scott 177	T, B, FA	6-5½x6	72.6	203-1800	855.2	5.00	690-1100	6	Se	I	AESW	2.50	2.50	2.31	2.31	.406	.343	.435	.435	(h)
14	Hall-Scott (5) 180	T, B	6-5x6	60.0	180-2200	706.8	4.82	490-1200	6	In	I	AESW	2.62	2.37	2.37	1.99	.482	.482	.497	.528	30
15	Hall-Scott (5) 190	T, B, RC	6-5¼x6	66.1	200-2000	779.3	5.00	568-1300	6	In	I	AESW	2.87	2.62	2.62	2.24	.482	.497	.497	.528	30
16	Hercules ZXA	Tr, Ind	4-2½x3	10.0	23-2000	58.8	6.10	40-2000	4	In	L	Sil	1.23	1.10	1.00	.875	.200	.200	.248	.248	30
17	Hercules ZXB	Tr, Ind	4-2⅝x3	11.0	25-2000	64.9	6.10	44-2000	4	In	L	Sil	1.23	1.10	1.00	.875	.200	.200	.248	.248	30
18	Hercules IX	T, Tr, Ind	4-2½x4	10.0	28-2000	78.0	5.20	55-2000	4	In	L	Sil	1.48	1.35	1.25	1.12	.250	.250	.310	.310	30
19	Hercules IXA	T, Tr, Ind	4-3x4	14.4	40-2000	113.0	5.50	79-2000	4	In	L	Sil	1.48	1.35	1.25	1.12	.250	.250	.310	.310	30
20	Hercules IXB	T, Tr, Ind	4-3¼x4	16.9	47-2000	133.0	5.20	92-2000	4	In	L	Sil	1.48	1.35	1.25	1.12	.250	.250	.310	.310	30
21	Hercules OOA	T, B, Tr, Ind	4-3½x4½	19.6	35-1200	173.2	4.20	107-1200	4	In	L	Sil	1.75	1.62	1.50	1.37	.326	.326	.373	.373	45
22	Hercules OOB	T, B, Tr, Ind	4-3¾x4½	22.5	38-1000	198.8	4.20	125.1000	4	In	L	Sil	1.75	1.62	1.50	1.37	.326	.326	.373	.373	45
23	Hercules OOC	T, B, Tr, Ind	4-4x4½	25.6	41-1000	226.2	4.20	143-1000	4	In	L	Sil	1.75	1.62	1.50	1.37	.326	.326	.373	.373	45
24	Hercules OX	T, B, Tr, Ind	4-4x5	25.6	46-1000	251.3	4.30	155-1000	4	In	L	Sil	1.87	1.87	1.81	1.81	.326	.326	.373	.373	45
25	Hercules OXC	T, B, Tr, Ind	4-4¼x5	28.9	56-1000	283.5	4.30	185-1000	4	In	L	Sil	1.87	1.87	1.81	1.81	.326	.326	.373	.373	45
26	Hercules K	T, Tr, Ind	4-4¼x5¾	28.9	55-1000	326.3	3.89	202-1000	4	In	L	Sil	2.25	2.25	2.00	2.00	.326	.326	.434	.434	45
27	Hercules L	T, Tr, Ind	4-4½x5¾	32.4	59-1000	365.8	3.78	226-1000	4	In	L	Sil	2.25	2.25	2.00	2.00	.326	.326	.434	.434	45
28	Hercules G	T, Tr, Ind	4-4¾x5¾	36.1	63-1000	407.6	3.89	250-1000	4	In	L	Sil	2.25	2.25	2.00	2.00	.326	.326	.434	.434	45
29	Hercules E	T, Tr, Ind	4-5x5¾	40.0	74-1000	451.4	4.00	288-1000	4	In	L	Sil	2.25	2.25	2.00	2.00	.326	.326	.434	.434	45
30	Hercules TX	Ind	4-5½x7	48.4	88-800	665.0	3.84	425-800	4	In	L	Sil	2.90	2.90	2.50	2.50	.375	.375	.497	.497	45
31	Hercules TXA	Ind	4-6x7	57.6	98-800	792.0	3.84	488-800	4	In	L	Sil	2.90	2.90	2.50	2.50	.375	.375	.437	.497	45
32	Hercules TXO	Ind	4-6⅜x7	65.0	112-800	894.0	3.84	586-800	4	In	L	Sil	2.90	2.90	2.50	2.50	.375	.375	.497	.497	45
33	Hercules QXA	T, B, Tr, Ind	6-3¼x4⅛	23.4	56-1000	190.0	5.50	130-1000	6	In	L	Sil	1.48	1.35	1.31	1.12	.281	.281	.310	.310	30
34	Hercules QXB	T, B, Tr, Ind	6-3¼x4⅛	16.9	61-1000	205.0	5.50	136-1000	6	In	L	Sil	1.48	1.35	1.31	1.12	.231	.281	.310	.310	30
35	Hercules JXA	T, B, Tr, Ind	6-3⅜x4¼	27.3	59-1000	223.0	5.16	141-1000	6	In	L	Sil	1.75	1.62	1.50	1.37	.322	.322	.373	.373	45
36	Hercules JXB	T, B, Tr, Ind	6-3⅝x4¼	31.5	68-1000	233.0	5.40	163-1000	6	In	L	Sil	1.75	1.62	1.50	1.37	.322	.322	.373	.373	45
37	Hercules JXC	T, B, Tr, Ind	6-3¾x4¼	33.7	73-1000	282.0	5.35	175-1000	6	In	L	Sil	1.75	1.62	1.50	1.37	.322	.322	.373	.373	45
38	Hercules JXD	T, B, Tr, Ind	6-4x4¼	38.4	84-1000	320.0	5.63	204-1000	6	In	L	Sil	1.75	1.62	1.50	1.37	.322	.322	.373	.373	45
39	Hercules WXC	T, B, Tr, Ind	6-4x4½	38.4	90-1000	339.0	5.00	212-1000	6	In	L	Sil	1.75	1.75	1.62	1.50	.356	.356	.373	.373	45
40	Hercules WXC-2	T, B, Tr, Ind	6-4⅛x4½	40.3	95-1000	360.8	5.00	233-1000	6	In	L	Sil	1.75	1.75	1.62	1.50	.356	.356	.373	.373	45
41	Hercules WXC-3	T, B, Tr, Ind	6-4¼x4½	43.3	101-1000	383-0	5.00	262-1000	6	In	L	Sil	1.75	1.75	1.62	1.50	.356	.356	.373	.373	45
42	Hercules YXC	T, B, Tr, Ind	6-4⅜x4¾	45.9	94-800	428.4	4.40	281-800	6	In	L	Sil	2.00	2.00	1.75	1.75	.388	.388	.373	.373	45
43	Hercules YXC-2	T, B, Tr, Ind	6-4½x4¾	48.6	98-800	543-0	4.7	300-800	6	In	L	Sil	2.00	2.00	1.75	1.75	.388	.388	.373	.373	45
44	Hercules YXC-3	T, B, Tr, Ind	6-4⅝x4¾	51.3	104-800	478.8	4.40	320-800	6	In	L	Sil	2.00	2.00	1.75	1.75	.388	.388	.373	.373	45
45	Hercules RXB	T, B, Tr, Ind	6-4½x5¼	48.6	110-1000	500.9	4.95	330-1000	6	In	L	Sil	2.00	2.00	1.75	1.75	.388	.388	.373	.373	45
46	Hercules RXC	T, B, Tr, Ind	6-4⅝x5¼	51.3	114-1000	529.2	4.95	350-1000	6	In	L	Sil	2.00	2.00	1.75	1.75	.388	.388	.373	.373	45
47	Hercules HXB	T, B, Tr, Ind	6-5x6	60.0	148-1000	707.0	4.50	455-1000	3	Se	L	Sil	2.44	2.31	2.12	2.00	.468	.468	.498	.498	30
48	Hercules HXC	T, B, Tr, Ind	6-5¼x6	66.2	164-1000	779.0	4.50	510-1000	3	Se	L	Sil	2.44	2.31	2.12	2.00	.468	.468	.498	.498	30
49	Hercules HXD	T, B, Tr, Ind	6-5½x6	72.8	180-1000	855.0	4.50	555-1000	3	Se	L	Sil	2.44	2.31	2.12	2.00	.468	.468	.498	.498	30
50	Hercules HXE	T, B, Tr, Ind	6-5¾x6	79.4	198-1000	935.0	4.50	615-1000	3	Se	L	Sil	2.44	2.31	2.12	2.00	.468	.468	.498	.498	30
51	International P-12	PU	4-3x4	14.4	22.5-2000	113.1	4.80	74-1000	1	Se	I	Sil	1.34	1.34	1.18	1.18	.244	.244	.340	.340	45
52	International P-30	PU	4-4¼x5	28.9	41-1150	283.7	4.80	190-800	1	Se	I	Sil	1.90	1.75	1.68	1.48	.441	.441	.432	.432	45
53	International 300	PU	4-4¾x6	36.1	55-1050	425.3	4.85	233-700	1	Se	I	Sil	2.18	2.18	1.75	1.93	.380	.426	.432	.432	45
54	International P-40	PU	6-3¾x4½	33.7	53.5-1800	298.2	4.19	175-750	1	Se	I	Spec	1.87	1.75	1.62	1.50	.343	.343	.372	.372	45
55	International P-50	PU	6-3¾x4½	33.7	66-1800	298.2	5.72	205-1200	1	Se	I	......	1.87	1.75	1.62	1.50	.343	.343	.372	.372	45
56	International HD-213	T	6-3 5/16x4⅛	26.3	78-3400	213.2	6.30	155-1000	6	In	L	Sil	1.68	1.46	1.50	1.34	.320	.320	.370	.370	45
57	International FC-132	T	4-3¼x4	16.8	33-2800	132.7	6.00	89-1200	4	In	L	Sil	1.34	1.18	1.18	.....	.310	.310	.310	.310	45
58	International HD-232	T	6-3 5/16x4½	26.3	81-3200	232.6	6.00	170-1000	6	In	L	Sil	1.68	1.34	1.50	1.15	.320	.320	.375	.375	45
59	International FAB-241	T	6-3⅜x4½	27.3	84-3200	241.5	.....	175-800	1	In	F	Sil	1.68	1.46	1.50	1.31	.293	.293	.342	.342	45
60	International FAB-259	T	6-3½x4½	29.4	89-3200	259.7	5.74	192-800	1	In	F	Sil	1.68	1.46	1.50	1.31	.293	.293	.342	.342	45
61	International FBB-298	T	6-3¾x4½	33.7	94-2800	298.2	5.70	218-1600	1	In	F	Sil	1.87	1.75	1.62	1.50	.341	.341	.372	.372	45
62	International FBB-361	T	6-4⅛x4½	40.8	111-2700	360.8	5.20	268-1500	1	In	F	Sil	2.25	1.62	2.00	1.37	.406	.406	.372	.372	45
63	International FBB-401	T	6-4⅛x5	40.8	114-2600	400.9	5.20	308-800	1	In	F	Sil	2.25	1.62	2.00	1.37	.406	.406	.372	.372	45
64	International FBB-450	T	6-4⅜x5	45.9	120-2400	451.0	5.20	331-800	1	In	I	Sil	2.25	1.62	2.00	1.37	.406	.406	.372	.372	45
65	International FEB	T	6-5x5½	60.0	140-2100	648.0	4.40	460-1000	1	In	F	Sil	2.37	2.37	2.12	2.12	.437	.437	.430	.430	45
66	Kermath ZX	M	4-2⅝x3	.....	25-3400	65.0	6.00	40-1700	4	In	L	Sil	1.31	1.06	.....	.....	.200	.200	.248	.248	30
67	Kermath XL	M	4-3¼x4	.....	33-2200	134.0	5.50	97-2200	4	In	L	Sil	1.50	1.37	.....	.....	.312	.312	.310	.310	30
68	Kermath XH	M	4-3¼x4	.....	50-3200	134.0	5.50	97-2200	4	In	L	Sil	1.50	1.37	.....	.....	.312	.312	.310	.310	30
69	Kermath OOB	M	4-3¾x4½	.....	40-2000	198.8	4.70	122-1200	4	In	L	Sil	1.75	1.62	.....	.....	.326	.326	.373	.373	45
70	Kermath 20HP	M	4-4x4	.....	20-1000	201.0	4.50	....	4	Se	L	CNS	1.75	1.75	.....	.....	.218	.218	.373	.373	45
71	Kermath OOC	M	4-4x4½	.....	50-2000	226.0	4.70	142-1200	4	In	L	Sil	1.75	1.62	.....	.....	.326	.326	.373	.373	45
72	Kermath F	M	4-4⅜x5½	.....	55-1500	330.0	4.80	....	4	Se	L	CNS	2.25	2.25	.....	.....	.375	.375	.375	.375	45
73	Kermath QXB	M	6-3¼x4⅛	.....	85-3600	205.0	6.50	....	6	In	L	Sil	1.46	1.34	.....	.....	.312	.312	.312	.312	30
74	Kermath QXC	M	6-3⅜x4⅛	.....	90-3600	221.0	6.75	....	6	In	L	Sil	1.62	1.34	.....	.....	.312	.312	.312	.312	30
75	Kermath JXCL	M	6-3¾x4¼	.....	80-2400	282.0	5.80	206-1300	6	In	L	Sil	1.75	1.62	.....	.....	.375	.375	.373	.373	45
76	Kermath JXCH	M	6-3¾x4¼	.....	102-3000	282.0	5.80	206-1300	6	In	L	Sil	1.75	1.62	.....	.....	.375	.375	.373	.373	45
77	Kermath JXD	M	6-4x4¼		....	320.0	5.80	....	6	In	L	Sil	1.75	1.62	.....	.....	.375	.375	.373	.373	45
78	Kermath WX	M	6-4¼x4½	.....	115-2600	383.0	5.50	265-1000	6	In	L	Sil	1.87	1.75	.....	.....	.375	.375	.373	.373	45
79	Kermath G	M	6-4⅜x5½	.....	106-2000	495.0	5.30	....	6	Se	L	CNS	2.25	2.25	.....	.....	.437	.375	.437	.375	45
80	Kermath DL	M	6-4⅜x5¼	.....	120-2000	519.0	5.70	....	6	Se	L	Sil	2.50	2.25	.....	.....	.437	.375	.437	.375	(h)
81	Kermath DH	M	6-4⅜x5¾	.....	150-2500	519.0	5.70	351-1000	6	Se	L	CNS	2.50	2.25	.....	.....	.437	.375	.437	.375	(h)
82	Kermath L	M	6-5x5¾	.....	158-1800	678.0	5.30	482-1000	6	Se	L	Sil	2.56	2.43	.....	.....	.375	.375	.437	.437	45
83	Kermath R	M	6-5x5¾	.....	235-2400	678.0	5.30	550-1400	6	Se	I	CNS	1.93	1.93	.....	.....	.375	.375	.437	.437	45
84	Kermath VFL	M	8-3 1/16x3¾	.....	85-3600	220.0	6.30	145-1800	8	In	L	Sil	1.50	1.50	.....	.....	.251	.251	.279	.279	45
85	Kermath VFH	M	8-3 1/16x3¾	.....	90-3600	220.0	6.30	160-1800	8	In	L	Sil	1.50	1.50	.....	.....	.251	.251	.279	.279	45
86	Kermath V	M	12-5x6	.....	450-2200	1414.0	5.30	1190-1200	6	Se	I	CNS	1.93	1.93	.....	.....	.375	.375	.437	.437	45
87	Lathrop Mystic	M	6-4½x5½	.....	96-1600	524.8	.....	321-1350	6	Se	L	CNS	2.25	2.25	2.00	2.00	.375	.375	.437	.437	45
88	Lathrop Mystic	M	6-4¾x5½	.....	106-1600	584.7	.....	379-900	6	Se	L	CNS	2.25	2.25	2.00	2.00	.375	.375	.437	.437	45
89	Lathrop Mystic	M	6-5½x6½	.....	155-1500	926.5	.....	561-1200	6	Se	L	CNS	2.68	2.68	2.31	2.31	.437	.437	.500	.500	45
90	Lathrop Mystic	M	6-5¾x6½	.....	179-1600	1012.8	.....	640-1100	6	Se	L	CNS	2.68	2.68	2.31	2.31	.437	.437	.500	.500	45
91	Lathrop Engineers	M	4-5½x7	.....	64-1000	665.2	.....	373.650	1	Se	L	CNS	2.68	2.50	2.31	2.12	.375	.375	.500	.500	45
92	Lathrop Engineers	M	4-6x7	.....	76-1000	791.6	.....	461-700	1	Se	L	CNS	2.68	2.50	2.31	2.12	.375	.375	.500	.500	45
93	Lathrop Standard	M	2-5 3/16x6½	.....	15.8-600	274.7	.....	140-525	1	Se	T	CNS	2.25	2.25	2.00	2.00	.375	.375	.437	.437	45
94	Lathrop Standard	M	2-5½x6½	.....	20-700	308.8	.....	163-525	1	Se	T	CNS	2.25	2.25	2.00	2.00	.375	.375	.437	.437	45
95	Lathrop Standard	M	3-5 3/16x6½	.....	27-700	412.1	.....	206-600	1	Se	T	CNS	2.25	2.25	2.00	2.00	.375	.375	.437	.437	45
96	Lathrop Standard	M	3-5½x6½	.....	34-800	463.2	.....	237-700	1	Se	T	CNS	2.25	2.25	200.	2.00	.375	.375	.437	.437	45
97	Lathrop Standard	M	4-5 3/16x6½	.....	29-700	549.5	.....	233-500	1	Se	T	CNS	2.25	2.25	2.00	2.00	.375	.375	.437	.437	45

For abbreviations see pages 292 and 293

COMMERCIAL VEHICLE ENGINES—*Continued*

Front End Drive—Type	Pistons: Material	Pistons: Length (In.)	Pistons: Weight (with Pins, Rings and Bushing)—(Oz.)	Pistons: Piston Pin—Diameter and Length (In.)	Number of Rings per Piston	Connecting Rods: Material	Connecting Rods: Center to Center Length (In.)	Connecting Rods: Weight—With Bushing and Caps (Oz.)	Crankshaft: Material	Crankshaft: Counterbalances Used	Crankshaft: Crank-pin Diameter and Length (In.)	Main Bearings: Number	Main Bearings: Diameter and Length (In.) Front	Main Bearings: Diameter and Length (In.) Rear	Oil Pressure To	Spark Plug: Recommended Make	Spark Plug: Thread Size	Carburetor: Make	Carburetor: Size	Adapted for Use of Kerosene or Distillate	Weight (Without Carburetor or Ignition)—(Lb.)	Overall Dimensions (In.): Width	Overall Dimensions (In.): Height	Overall Dimensions (In.): Length	Line Number
HC	Al	5.26	56.0	1.25x3.34	5	AS	11	101.0	4140	Y	2.37x2.00	4	2.75x2.18	2.75x3.18	abcefg	CH	18 mm.	Zen	1¾	No	2392§	28	42½	90	1
Ch	Al	5.09	40.2	1.25x3.50	4	AS	11	82.0	4140	N	2.62x1.75	7	3.00x1.50	3.00x2.25	abcefg	CH	18 mm.	Zen	1½	No	1173§	54¾	18 1/16	52⅞	2
Ch	Al	5.40	52.5	1.12x3.75	4	AS	11	83.0	4140	Y	2.62x1.75	7	3.00x1.50	3.00x2.25	abcefg	CH	18 mm.	Zen	1¾	No	1252§	54¾	18 1/16	52⅞	3
Ch	Al	5.20	62.0	1.12x4.00	4	AS	11	83.0	3140	Y	2.62x1.75	7	3.00x1.50	3.00x2.25	abcefg	CH	18 mm.	Zen	1¾	No	1265§	54¾	18 1/16	52⅞	4
HC	Al	4.50	40.7	1.00x3.43	4	AS	11	75.0	4140	N	2.25x1.43	4	2.75x2.68	2.75x2.68	abcefg	CH	18 mm.	Zen	1½	No	1180§	25¾	38 1/16	49 1/16	5
HC	Al	4.56	52.0	1.25x3.34	6	AS	11	102.0	CNS	N	2.25x2.00	4	2.75x2.18	2.75x3.18	abcefg	CH	18 mm.	Zen	1¾	No	1310§	30 11/16	39 5/16	54⅝	6
HC	Al	5.26	60.0	1.25x3.34	5	AS	11	101.0	4140	Y	2.37x2.00	4	2.75x2.18	2.75x3.18	abcefg	CH	18 mm.	Zen	1¾	No	1407§	29 11/16	46⅛	57 1/16	7
HC	Al	5.21	58.5	1.25x3.25	6	AS	11	102.0	CM	Y	2.37x2.00	4	2.75x2.18	2.75x3.18	abcefg	CH	18 mm.	Zen	1¾	No	1310§	31 3/32	49 1/16	55 1/16	8
HC	Al	5.21	57.0	1.25x3.25	6	AS	11	105.0	CNS	N	2.25x2.00	3	2.75x2.31	2.75x3.31	abcefg	CH	⅞-18	Zen	1½	D	1135§	27 1/16	40½	46 11/16	9
HC	Al	5.20	74.5	1.25x3.75	6	AS	11	100.0	CNS	N	2.37x2.00	3	3.00x2.31	3.00x2.31	abcefg	CH	⅞-18	Zen	1½	D	1160§	27¼	40¾	49⅝	10
HC	Al	6.31	97.0	1.37x4.18	4	AS	11	113.5	4140	Y	2.50x2.00	7	3.25x1.43	3.25x2.43	abcefg	CH	18 mm.	Zen	2	No	1830§	32 1/16	44 1/16	59⅞	11
HC	Al	5.87	.....	1.37x4.44	5	AS	11	113.5	4140	Y	2.50x2.00	7	3.25x1.43	3.25x2.43	abcefg	CH	18 mm.	Zen	2	No	1830§	32 1/16	44 1/16	59⅞	12
HC	Al	5.97	114.0	1.37x4.68	5	AS	11	113.5	4140	Y	2.50x2.00	7	3.25x1.43	3.25x2.43	abcefg	CH	18 mm.	Zen	2	No	1900§	32 1/16	44 1/16	59⅞	13
Ch	Al	6.17	77.0	1.37x4.18	4	AS	11	103.5	4140	Y	2.75x2.00	7	3.25x2.18	3.25x2.56	abcefg	CH	18 mm.	Zen	2	No	1960§	59 5/16	20 1/16	67 11/16	14
Ch	Al	6.18	104.0	1.37x4.43	4	AS	11	103.5	4140	Y	2.75x2.00	7	3.25x2.18	3.25x2.56	abcefg	CH	18 mm.	Zen	1¾	No	.....	53½	22¼	67 11/16	15
HI	CI	2.68	17.5	.687x2.18	3	3140	5⅛	15.5	1045	N	1.50x1.00	3	2.00x1.31	2.00x1.37	abce	Op	14 mm.	Op	......	K-D	179	14¾	16 5/16	21 1/16	16
HI	CI	2.68	19.0	.687x2.18	3	3140	5⅛	15.5	1045	N	1.50x1.00	3	2.00x1.31	2.00x1.37	abce	Op	14 mm.	Op	......	K-D	179	14¾	16 5/16	21 1/16	17
HI	CI	2.43	18.0	.750x2.18	3	3140	6 5/16	21.0	1045	N	1.75x1.12	3	2.00x1.56	2.00x1.62	abce	Op	18 mm.	Op	......	K-D	250	16⅝	18¾	24 1/16	18
HI	CI	3.06	28.0	.750x2.56	3	3140	6 5/16	21.0	1045	N	1.75x1.12	3	2.00x1.56	2.00x1.62	abce	Op	⅞-18	Op	......	K-D	283	16⅝	18¾	24 1/16	19
HI	CI	3.06	29.5	.750x2.81	3	3140	6 5/16	21.0	1045	N	1.75x1.12	3	2.00x1.56	2.00x1.62	abce	Op	⅞-18	Op	......	K-D	291	16⅝	18¾	24 1/16	20
HI	CI	4.31	49.0	1.00x3.12	3	1035	8	37.5	1045	N	2.00x1.50	3	2.00x2.18	2.00x2.62	abce	Op	⅞-18	Op	......	K-D	460	17½	23¼	29 1/16	21
HI	CI	4.12	56.5	1.00x3.37	3	1035	8	37.5	1045	N	2.00x1.50	3	2.00x2.18	2.00x2.62	abce	Op	⅞-18	Op	......	K-D	460	17½	23¼	29⅞	22
HI	CI	4.31	56.0	1.00x3.62	3	1035	8	37.5	1045	N	2.00x1.50	3	2.00x2.18	2.00x2.62	abce	Op	⅞-18	Op	......	K-D	460	17½	23¼	29⅞	23
HI	CI	4.87	67.5	1.37x2.37	5	1035	9½	58.5	1045	N	2.00x2.25	3	2.00x3.18	2.00x3.31	abce	Op	⅞-18	Op	......	K-D	655	20 11/16	28 1/16	36 1/16	24
HI	CI	4.87	73.5	1.37x2.37	5	1035	9½	58.5	1045	N	2.00x2.25	3	2.00x3.18	2.00x3.31	abce	Op	⅞-18	Op	......	K-D	655	20 11/16	28 1/16	36 1/16	25
HI	CI	5.25	82.5	1.50x3.75	5	1035	10⅞	83.0	1045	N	2.50x2.62	3	3.00x3.37	3.00x3.50	abce	Op	⅞-18	Op	......	K-D	875	21 11/16	30⅞	41 1/16	26
HI	CI	5.25	95.5	1.50x4.00	5	1035	10⅞	83.0	1045	N	2.50x2.62	3	3.00x3.37	3.00x3.50	abce	Op	⅞-18	Op	......	K-D	880	21 11/16	30⅞	41 1/16	27
HI	CI	5.25	103.0	1.50x4.25	5	1035	10⅞	83.0	1045	N	2.50x2.62	3	3.00x3.37	3.00x3.50	abce	Op	⅞-18	Op	......	K-D	885	21 11/16	30⅞	41 1/16	28
HI	CI	5.25	106.5	1.50x4.50	5	1035	10⅞	83.0	1045	N	2.50x2.62	3	3.00x3.37	3.00x3.50	abce	Op	⅞-18	Op	......	K-D	890	21 11/16	30⅞	41 1/16	29
HI	CI	7.00	196.5	1.87x4.87	5	1035	13¼	178.0	1045	N	3.00x3.00	3	3.75x4.37	3.75x4.50	abce	Op	⅞-18	Op	......	K-D	1800	26 1/16	38	52½	30
HI	CI	7.00	222.5	1.87x5.37	5	1035	13¼	178.0	1045	N	3.00x3.00	3	3.75x4.37	3.75x4.50	abce	Op	⅞-18	Op	......	K-D	1815	26 1/16	38	52½	31
HI	CI	7.00	240.0	1.87x5.75	5	1035	13¼	178.0	1045	N	3.00x3.00	3	3.75x4.37	3.75x4.50	abce	Op	⅞-18	Op	......	K-D	1850	26 1/16	38	52½	32
HI	CI	3.50	52.7	.875x2.67	4	1035	7	26.0	CS	Op	1.98x1.02	7	2.50x1.39	2.50x1.93	abce	Op	⅞-18	Op	......	K-D	480	21½	22 11/16	33 1/16	33
HI	CI	3.50	52.7	.875x2.79	4	1035	7	26.0	CS	Op	1.98x1.02	7	2.50x1.39	2.50x1.93	abce	Op	⅞-18	Op	......	K-D	480	21½	22 11/16	33 1/16	34
HI	CI	4.37	43.0	1.00x2.90	4	1035	8	37.5	1045	Op	2.00x1.50	7	2.50x1.31	2.50x2.12	abce	Op	⅞-18	Op	......	K-D	550	17⅝	23½	37⅜	35
HI	CI	4.18	48.0	1.00x3.15	4	1035	8	37.5	1045	Op	2.00x1.50	7	2.50x1.31	2.50x2.12	abce	Op	⅞-18	Op	......	K-D	560	17⅝	23½	37⅜	36
HI	CI	4.12	56.5	1.00x3.37	4	1035	8	37.5	1045	Op	2.00x1.50	7	2.50x1.31	2.50x2.12	abce	Op	⅞-18	Op	......	K-D	565	17⅝	23½	37⅜	37
HI	Al	4.18	40.5	1.00x3.51	4	1035	8	37.5	1045	Op	2.00x1.50	7	2.50x1.31	2.50x2.12	abce	Op	⅞-18	Op	......	K-D	570	17⅝	23½	37⅜	38
HI	CI	4.56	64.5	1.12x3.56	5	1035	9⅛	51.5	1045	Op	2.25x1.50	7	2.62x1.75	2.62x2.75	abce	Op	⅞-18	Op	......	K-D	805	21	27	41 11/16	39
HI	CI	4.56	65.0	1.12x3.62	5	1035	9⅛	51.5	1045	Op	2.25x1.50	7	2.62x1.75	2.62x2.75	abce	Op	⅞-18	Op	......	K-D	810	21	27	41 11/16	40
HI	CI	4.56	83.0	1.12x3.68	5	1035	9⅛	51.5	1045	Op	2.25x1.50	7	2.62x1.75	2.62x2.75	abce	Op	⅞-18	Op	......	K-D	820	21	27	41 11/16	41
HI	CI	4.87	79.5	1.25x3.93	5	1035	9⅝	64.5	1045	Op	2.50x1.75	7	3.00x2.00	3.00x3.00	abce	Op	⅞-18	Op	......	K-D	975	21 11/16	31 11/16	45 1/16	42
HI	CI	4.87	85.0	1.25x3.93	5	1035	9⅝	64.5	1045	Op	2.50x1.75	7	3.00x2.00	3.00x3.00	abce	Op	⅞-18	Op	......	K-D	975	21 11/16	31 11/16	45 1/16	43
HI	CI	4.87	87.0	1.25x4.06	5	1035	9⅝	64.5	1045	Op	2.50x1.75	7	3.00x2.00	3.00x3.00	abce	Op	⅞-18	Op	......	K-D	975	21 11/16	31 11/16	45 1/16	44
HI	Al	4.87	60.0	1.25x3.93	5	3140	9⅝	81.0	1045	Op	2.62x2.00	7	3.00x1.93	3.00x2.93	abce	Op	⅞-18	Op	......	K-D	1000	21 11/16	31 11/16	45 1/16	45
HI	Al	4.87	62.0	1.25x4.06	5	3140	9⅝	81.0	1045	Op	2.62x2.00	7	3.00x1.93	3.00x2.93	abce	Op	⅞-18	Op	......	K-D	1010	21 11/16	31 11/16	45 1/16	46
HI	Al	6.50	95.0	1.50x4.43	4	3140	12	143.0	1045	Op	3.00x2.25	7	3.50x2.37	3.50x3.50	abcde	Op	⅞-18	Op	......	K-D	1810	24½	40½	54½	47
HI	Al	6.87	105.0	1.50x4.56	4	3140	12	143.0	1045	Op	3.00x2.25	7	3.50x2.37	3.50x3.50	abcde	Op	⅞-18	Op	......	K-D	1810	24½	40½	54½	48
HI	Al	6.87	117.5	1.50x4.81	4	3140	12	143.0	1045	Op	3.00x2.25	7	3.50x2.37	3.50x3.50	abcde	Op	⅞-18	Op	......	K-D	1830	24½	40½	54½	49
HI	Al	7.25	127.5	1.50x5.06	4	3140	12	143.0	1045	Op	3.00x2.25	7	3.50x2.37	3.50x3.50	abcde	Op	⅞-18	Op	......	K-D	1830	24½	40½	54½	50
HI	CI	3.59	34.7	.919x2.50	5	CS	7¼	31.3	1045	N	1.75x1.31	3	2.12x1.62	2.12x1.84	abc	AC	⅞-18	Own	1	K-D	830§	20 1/16	33 27/32	29 27/32	51
HI	CI	6.12	.....	1.29x3.68	4	CS	11¼	102.4	4140	N	2.62x2.74	2	SAE-314	SAE-316	Splash	CA	⅞-18	Zen	1¼	K-D	1670	25¾	42 13/16	42	52
Sp	CI	5.82	.....	1.48x4.12	4	CS	13	152.0	4140	N	3.12x2.75	2	SAE-315	SAE-318	Splash	CA	⅞-18	Own	1¼	K-D	2090	27¼	44½	45 15/16	53
HI	CI	4.03	.....	1.10x3.00	5	AS	9¼	55.2	1045	N	2.24x1.62	7	2.70x1.53	2.70x1.31	abcde	CA	⅞-18	Zen	1½	K-D	1815§	28	34⅛	49 9/16	54
HI	Al	4.56	34.4	1.10x3.18	4	AS	9¼	55.2	1045	N	2.24x1.62	7	2.70x1.53	2.70x1.31	abcde	CA	⅞-18	Zen	1½	K-D	.....	28	34⅛	49 9/16	55
Ch	CI	3.93	31.2	.978x2.88	4	CS	8¼	34.3	CS	Y	2.00x1.14	4	2.62x1.54	2.62x2.09	abcde	AC	18 mm.	Zen	1¼	No	474	.....	.....	.....	56
HI	CI	3.50	24.6	.874x2.70	3	CS	7¼	28.3	CS	N	1.75x1.06	3	2.12x1.18	2.12x1.43	abcde	AC	18 mm.	Zen	1	No	347	.....	.....	.....	57
HI	CI	3.93	31.2	.978x2.88	4	CS	8¼	34.3	CS	Y	2.00x1.14	4	2.62x1.54	2.62x2.09	abcde	AC	18 mm.	Zen	1¼	No	550	.....	.....	.....	58
HI	CI	3.50	34.5	.919x2.95	4	AS	8 9/16	38.1	CNS	Y	2.12x1.34	4	2.37x1.21	2.37x1.81	abcde	AC	⅞-18	Zen	1¼	No	742	.....	.....	.....	59
HI	CI	3.50	36.3	.919x2.95	4	AS	8 9/16	38.1	CNS	Y	2.12x1.34	4	2.37x1.21	2.37x1.81	abcde	AC	⅞-18	Zen	1¼	No	732	.....	.....	.....	60
HI	Al	4.56	29.6	1.109x3.17	4	AS	9¼	48.9	CS	N	2.25x1.40	7	2.70x1.54	2.70x2.54	abcde	AC	⅞-18	Zen	1¼	No	907	.....	.....	.....	61
HI	Al	4.90	42.7	1.109x3.55	4	AS	9	49.6	CS	Y	2.25x1.40	7	2.70x1.62	2.70x2.54	abcde	AC	⅞-18	Zen	1¼	No	935	.....	.....	.....	62
HI	Al	4.50	43.6	1.109x3.55	4	AS	9	49.6	CS	Y	2.25x1.40	7	2.70x1.62	2.70x2.54	abcde	AC	⅞-18	Zen	1¼	No	945	.....	.....	.....	63
HI	Al	4.31	49.8	1.109x3.80	4	AS	9	49.6	CS	Y	2.25x1.40	7	2.70x1.62	2.70x2.54	abcde	AC	⅞-18	Zen	1½	No	950	.....	.....	.....	64
HI	Al	5.50	112.6	1.499x4.32	4	CS	11¾	136.9	CNS	Y	2.75x2.25	7	3.25x2.56	3.25x3.50	abcde	AC	⅞-18	Zen	1½	No	1790	.....	.....	.....	65
HI	CI	2.68	18.0	.687x2.50	4	3140	5⅛	15.5	1045	N	1.50x1.00	3	2.00x1.37	2.00x1.31	abm	CH	14 mm.	Str	¾†	No	260§	18 11/16	17⅝	28 5/16	66
HI	Al	3.06	20.0	.750x2.87	4	3140	6 9/16	20.0	CS	N	1.75x1.12	3	2.00x1.62	2.00x1.56	abem	CH	⅞-18	Str	1¼†	No	405§	23⅛	21 15/16	34 3/16	67
HI	Al	3.00	20.0	.750x2.87	4	3140	6 9/16	20.0	CS	N	1.75x1.12	3	2.00x1.62	2.00x1.58	abem	CH	⅞-18	Str	1¼†	No	370§	23⅛	21 15/16	34 3/16	68
HI	Al	4.12	36.0	1.00x3.37	4	CS	8	37.5	1045	N	2.00x1.50	3	2.00x2.62	2.00x2.18	abem	CH	⅞-18	Str	1¼†	No	700§	23 1/16	26	44 9/16	69
Sp	CI	4.12	73.0	.875x3.12	3	CS	9	38.0	CS	N	1.37x2.25	3	1.37x3.62	1.37x3.00	Splash	CH	⅞-18	May	⅞	No	590§	21	28¾	51 11/16	70
HI	Al	4.31	40.0	1.00x3.62	4	CS	8	37.5	1045	N	2.00x1.50	3	2.00x2.62	2.00x2.18	abem	CH	⅞-18	Str	1¾†	No	710§	23 1/16	26	44 9/16	71
HI	Als	5.25	62.0	1.25x3.87	4	CS	11	81.0	CS	N	2.00x2.25	5	2.00x3.87	2.00x2.62	abcem	CH	⅞-18	Str	1½†	No	830§	23⅞	31⅝	55 11/16	72
HI	Al	3.50	52.7	.875x2.79	4	CS	7	26.0	CS	N	2.00x1.25	7	2.50x1.93	2.50x1.87	abcem	CH	14 mm.	Str	1½†	No	620§	24	23	41⅜	73
HI	Al	3.50	52.7	.875x2.79	4	CS	7	26.0	CS	Y	1.98x1.02	7	2.50x1.93	2.50x1.39	abcem	CH	14 mm.	Str	1½†	No	620§	24	23	41⅜	74
HI	Al	4.12	56.5	1.00x3.37	4	CS	8	38.0	CS	N	2.00x1.50	7	2.50x2.12	2.50x1.37	abcem	CH	⅞-18	Str	1½†	No	865§	23 1/16	26¾	51⅝	75
HI	Al	4.12	36.0	1.00x3.37	4	CS	8	38.0	CS	N	2.00x1.50	7	2.50x2.12	2.50x1.37	abcem	CH	⅞-18	Str	1½	No	795§	23 1/16	26¾	51⅝	76
HI	Al	4.18	40.5	1.00x3.51	4	CS	8	38.0	CS	N	2.00x1.50	7	2.50x2.12	2.50x1.37	abcem	CH	⅞-18	Str	1½†	No	865§	23 1/16	26¾	50¾	77
HI	Al	4.56	83.0	1.12x3.68	4	CS	9⅛	51.5	CS	N	2.25x1.50	7	2.62x2.75	2.62x1.75	abcem	CH	14 mm.	Str	1¾†	No	1125§	24¾	28⅜	55 9/16	78
HI	Als	5.25	62.0	1.25x3.62	4	CS	11	80.0	CS	Y	2.25x2.23	7	2.50x3.91	2.50x2.56	abcdem	CH	⅞-18	Str	2†	No	1530§	26¾	33¼	68¾	79
HI	Als	5.25	62.0	1.25x3.62	4	CS	11	80.0	CS	N	2.25x2.23	7	2.50x3.91	2.50x2.56	abcdem	CH	14 mm.	Str	2†	No	1390§	26¾	33¼	68¾	80
HI	Als	5.25	62.0	1.25x3.62	4	CS	11	80.0	CS	N	2.25x2.23	7	2.50x3.91	2.50x2.56	abcdem	CH	14 mm.	Str	2†	No	1530§	26¾	33¼	68¾	81
HI	Als	6.19	82.0	1.25x4.50	4	CS	11	80.0	CS	N	2.25.2 23	7	2.50x3.91	2.50x2.62	abcdem	CH	18 mm.	Str	2†	No	1570§	29 13/16	34 1/16	69 1/16	82
SB	Als	6.19	82.0	1.25x4.50	4	CS	11	80.0	CS	N	2.25x2.23	7	2.50 3.91	2.50x2.62	abcdem	CH	18 mm.	Str	1¾†	No	1500§	30¼	39¾	69⅝	83
HI	Al	.....	10.6	.750x2.85	3	.....	7	16.5	CS	Y	2.00x1.94	3	2.40x1.56	2.40x2.25	abc	CH	14 mm.	Str	.97†	No	730§	29 1/16	31 5/16	43	84
HI	Al	.....	10.6	.750x2.85	3	.....	7	16.5	CS	Y	2.00x1.94	3	2.40x1.56	2.40x2.25	abc	CH	14 mm.	Str	.97†	No	640§	29 1/16	31 5/16	43	85
SB	Als	6.19	82.0	1.25x4.50	4	CS	11	184.0	CS	Y	2.75x2.25	7	3.00x3.84	3.00x2.25	abcdem	CH	18 mm.	Str(2)	1¾	No	2480	42½	38¼	75 11/16	86
HI	CI	5.75	96.0	1.37x3.87	4	Dur	12¼	68.0	CNS	N	2.25x2.37	7	2.75x3.25	2.75x2.12	abce	AC	⅞-18	Hol	†	No	1700	24½	27¾	68	87
HI	CI	5.75	104.0	1.37x4.12	4	Dur	12¼	68.0	CNS	N	2.25x2.37	7	2.75x3.25	2.75x2.12	abce	AC	⅞-18	Hol	†	No	1700	24½	27¾	68	88
HI	CI	6.21	176.0	1.50x5.00	4	AS	13¼	164.0	CNS	N	2.75x2.75	7	3.00x3.37	3.00x3.25	abce	AC	⅞-18	Hol	†	No	2435	24½	29⅜	78½	89
HI	CI	6.21	176.0	1.50x5.12	4	AS	13¼	164.0	CNS	N	2.75x2.75	7	3.00x3.37	3.00x3.25	abce	AC	⅞-18	Hol	†	No	2460	24½	29⅜	78½	90
HI	CI	6.25	186.0	1.50x5.00	4	AS	13¼	172.0	CNS	N	2.75x2.75	5	3.00x3.50	3.00x3.50	abce	AC	⅞-18	Zen	†	No	2100	29¼	24	74¼	91
HI	CI	6.25	204.0	1.50x5.50	4	AS	13¼	172.0	CNS	N	2.75x2.75	5	3.00x3.50	3.00x3.50	abce	AC	⅞-18	Zen	†	No	2290	29¼	24	75	92
HI	CI	7.00	160.0	1.37x4.62	4	AS	12¼	96.0	CNS	N	1.87x2.75	3	2.25x5.00	2.25x4.00	abe	AC	⅞-18	Zen	1¼	No	975	23½	22	55½	93
HI	CI	7.00	179.0	1.37x5.00	4	AS	12¼	96.0	CNS	N	1.87x2.75	3	2.25x5.00	2.25x4.00	abe	AC	⅞-18	Zen	1¼	No	1000	23½	22	55½	94
HI	CI	7.00	160.0	1.37x4.62	4	AS	12¼	96.0	CNS	N	1.87x2.75	4	2.25x5.00	2.25x4.00	abe	AC	⅞-18	Zen	1½	No	1400	25	22¼	60½	95
HI	CI	7.00	179.0	1.37x5.00	4	AS	12¼	96.0	CNS	N	1.87x2.75	4	2.25x5.00	2.25x4.00	abe	AC	⅞-18	Zen	1½	No	1450	25	22¼	60½	96
HI	CI	7.00	160.0	1.37x4.62	4	AS	12¼	96.0	CNS	N	1.87x2.75	5	2.25x5.00	2.25x4.00	abe	AC	⅞-18	Zen	1½	No	1700	25¾	22¼	68½	97

For abbreviations see pages 292 and 293

AMERICAN STOCK, MARINE AND

Line Number	Make and Model	Designed for	Number of Cylinders Bore and Stroke (In.)	Rated Hp. (A.M.A.)	Maximum Brake Hp. at Specified R.P.M.	Piston Displacement (Cu. In.)	Compression Ratio	Maximum Torque at R.P.M. (Lb. Ft.)	No. of Cylinders Cast in One Piece	Crankcase—Upper Half Integral with Cylinders	Valves: Arrangement	Valves: Exhaust Head Material or S.A.E. No.	Valves: Max. Head Diameter (In.) Intake	Valves: Max. Head Diameter (In.) Exhaust	Valves: Min. Port Diameter (In.) Intake	Valves: Min. Port Diameter (In.) Exhaust	Valves: Lift (In.) Intake	Valves: Lift (In.) Exhaust	Valves: Stem Diameter (In.) Intake	Valves: Stem Diameter (In.) Exhaust	Seat Angle (Degrees)
1	Lathrop Standard	M	4-5½x6½	....	49-800	617.7	....	342-600	1	Se	T	CNS	2.25	2.25	2.00	2.00	.375	.375	.437	.437	45
2	Lathrop Standard	M	6-5½x6½	....	73-750	926.5	....	515-675	1	Se	T	CNS	2.25	2.25	2.00	2.00	.375	.375	.437	.437	45
3	Lathrop Standard	M	6-5½x6½	....	103-1000	926.5	....	550-825	1	Se	T	CNS	2.25	2.25	2.00	2.00	.500	.500	.437	.437	45
4	Lathrop LH	M	4-3¼x4	....	38-2200	133.0	....	92-2000	4	In	L	CNS	....	....	1.25	1.12	.312	.312	.312	.312	30
5	Lathrop LH	M	4-4x4½	....	49-1900	226.0	....	152-1300	4	In	L	CNS	....	....	1.50	1.37	.312	.312	.375	.375	30
6	Lathrop LH	M	6-3¾x4¼	....	62-2200	282.0	....	173-550	6	In	L	CNS	....	....	1.50	1.37	.312	.312	.375	.375	30
7	Lehman-Ford V1	M	8-3 1/16x3¾	....	90-4000	221.0	6.12	140-2000	8	In	L	CNS	1.68	1.68	....	....	.343	.343	.312	.312	45
8	Lehman-Zephyr Z1	M	12-2¾x3¾	....	110-3900	267.2	6.70	186-2000	12	In	L	CNS	1.53	1.53	....	....	.292	.292	.311	.311	45
9	Lehman-Ford D1	M	8-2.60x3.20	....	60-4000	136.0	6.60	94-2500	8	In	L	CNS	....	....	....	....	....	....	....	....	45
10	Lehman-Ford RV39	M	8-3 1/16x3¾	....	102-4160	221.0	7.75	156-2240	8	In	L	SCA	1.68	1.68	....	....	.343	.343	.312	.312	45
11	Lycoming D	Ind	4-3⅛x3⅞	15.6	20-1600	118.8	4.82	71-1300	4	In	L	Sil	1.54	1.42	1.37	1.37	.312	.312	.343	.343	30
12	Lycoming AFD	Ind	4-3¾x4½	22.5	37-1600	198.8	4.82	134-750	4	In	L	Sil	1.65	1.53	1.50	1.37	.312	.312	.343	.343	45
13	Lycoming AFE	T	4-3¾x4½	22.5	49-2600	198.8	4.82	135-1150	4	In	L	Sil	1.65	1.65	1.50	1.37	.312	.312	.343	.343	45
14	Lycoming WF	C	6-3 1/16x4¼	22.5	82-3500	209.9	6.20	155-1800	6	In	L	Sil	1.56	1.40	1.37	1.25	.312	.312	.343	.343	(h)
15	Lycoming ASE	T, B	6-3¾x4½	33.7	90-3100	298.2	5.26	205-800	6	In	L	Sil	1.93	1.81	1.75	1.62	.312	.312	.375	.375	(h)
16	Lycoming GFD	Ta	8-3 1/16x4¾	30.0	74-2800	279.9	5.75	192-800	8	In	L	Sil	1.56	1.40	1.37	1.25	.281	.281	.343	.343	(h)
17	Lycoming GG	C	8-3 1/16x4¾	30.0	113-3600	279.9	6.67	210-1800	8	In	L	Sil	1.56	1.40	1.37	1.25	.312	.312	.343	.343	(h)
18	Lycoming FB	C	8-3½x3¾	39.2	115-3500	288.6	6.32	222-2000	8	In	HB	Sil	1.68	1.50	1.50	1.37	.343	.343	.343	.343	(h)
19	Lycoming AEF	T, B	8-3¾x4¾	45.0	120-2800	419.6	5.26	302-1200	8	In	L	Sil	1.93	1.62	1.75	1.50	.343	.343	.375	.375	(h)
20	Lycoming GH	C	8-3 1/16x4¾	30.0	148-2000	279.9	6.67	232-2400	8	In	L	Sil	1.56	1.40	1.37	1.25	.312	.312	.343	.343	(h)
21	Lycoming FC	C	8-3½x3¾	39.2	175-4200	288.6	6.32	258-2800	8	In	HB	Sil	1.68	1.50	1.50	1.37	.343	.343	.343	.343	(h)
22	Lycoming BB	C	12-3⅛x4¼	46.8	160-3500	391.2	5.75	286-1500	12	In	HH	Sil	1.65	1.56	1.37	1.37	.343	.343	.343	.343	30
23	Lycoming BF	T	12-3½x4½	58.8	170-3300	490.6	7.04	364-1300	12	In	HH	Sil	1.65	1.56	1.37	1.37	.343	.343	.343	.343	30
24	Lycoming EUF	Ind	12-4¾x4¾	108.3	245-1800	1010.1	5.12	....	12	In	HH	Sil	2.21	2.09	2.00	1.81	.437	.437	.437	.437	30
25	Lycoming UF	M	12-4¾x4¾	....	325-2500	1010.1	5.12	750-1700	12	In	HH	Sil	2.21	2.09	2.00	1.81	.437	.437	.437	.437	30
26	Lycoming UFD	M	12-4¾x4¾	....	325-2500	1010.1	5.12	750-1700	12	In	HH	Sil	2.21	2.09	2.00	1.81	.437	.437	.437	.437	30
27	Lycoming UAE	M	4-3 5/16x3⅞	....	58-3400	133.5	6.50	106-1800	4	In	L	Sil	1.54	1.42	1.37	1.25	.312	.312	.343	.343	30
28	Lycoming UAED	M	4-3 5/16x3⅞	....	58-3400	133.5	6.50	106-1800	4	In	L	Sil	1.54	1.42	1.37	1.25	.312	.312	.343	.343	30
29	Lycoming UH	M	6-3 1/16x4¾	....	85-3000	209.9	6.70	166-1500	6	In	L	Sil	1.56	1.40	1.37	1.25	.312	.312	.343	.343	(h)
30	Lycoming UHD	M	6-3 1/16x4¾	....	85-3000	209.9	6.70	166-1500	6	In	L	Sil	1.56	1.40	1.37	1.25	.312	.312	.343	.343	(h)
31	Lycoming UHB	M	6-3 5/32x4¾	....	105-3600	222.9	6.70	180-2200	6	In	L	Sil	1.56	1.40	1.37	1.25	.312	.312	.343	.343	(h)
32	Lycoming UHBD	M	6-3 5/32x4¾	....	105-3600	222.9	6.70	180-2200	6	In	L	Sil	1.56	1.40	1.37	1.25	.312	.312	.343	.343	(h)
33	Lycoming UHET	M	6-3 5/32x4¾	....	180-	222.9	....	....	6	In	L	Sil	1.46	1.34	1.37	1.25	.375	.375	.343	.343	(h)
34	Lycoming UJ	M	8-3 5/32x4¾	....	125-3400	297.2	6.70	220-1700	8	In	L	Sil	1.56	1.40	1.37	1.25	.312	.312	.343	.343	(h)
35	Lycoming UJD	M	8-3 5/32x4¾	....	125-3400	297.2	6.70	220-1700	8	In	L	Sil	1.56	1.40	1.37	1.25	.312	.312	.343	.343	(h)
36	Lycoming UEB	M	8-3¾x4¾	....	165-3200	419.6	6.10	305-2000	8	In	L	Sil	1.93	1.81	1.75	1.62	.343	.343	.375	.375	(h)
37	Lycoming UEBD	M	8-3¾x4¾	....	165-3200	419.6	6.10	305-2000	8	In	L	Sil	1.93	1.81	1.75	1.62	.343	.343	.375	.375	(h)
38	Minneapolis-Moline GE	Tr	4-4⅝x6	....	54-1075	403.2	4.20	273-850	2	Se	I	Sil	1.84	1.72	1.50	1.62	.405	.405	.497	.497	45
39	Minneapolis-Moline KEA	Tr	4-4¼x5	....	41-1150	283.1	4.32	187-1000	4	Se	I	Sil	1.72	1.50	1.50	1.37	.488	.488	.372	.372	45
40	Minneapolis-Moline RE	Tr	4-3⅝x4½	....	33-1500	185.7	4.50	120-1100	2	Se	HH	Sil	1.47	1.47	1.25	1.25	.354	.354	.341	.341	45
41	Murray & Tregurtha K-6	M	6-6¼x7¾	....	325-1650	1426.6	5.25	1110-1525	3	Se	I	Spec	2.46	2.46	2.25	2.25	.375	.375	.437	.437	30
42	Murray & Tregurtha M-6	M	6-6½x8	....	175-1100	1593.0	4.20	882-695	2	Se	I	Spec	2.46	2.46	2.25	2.25	.500	.500	.437	.437	30
43	Murray & Tregurtha OC-6	M	6-6½x8	....	140-1100	1593.0	3.33	910-600	2	Se	I	Spec	2.46	2.46	2.25	2.25	.500	.500	.437	.437	30
44	Murray & Tregurtha OC-4	M	4-6½x8	....	80-1000	1062.4	3.33	560-600	2	Se	I	Spec	2.46	2.46	2.25	2.25	.500	.500	.437	.437	30
45	Murray & Tregurtha M-4	M	4-6½x8	....	90-1000	1062.4	4.20	660-700	2	Se	I	Spec	2.46	2.46	2.25	2.25	.500	.500	.437	.437	30
46	Murray & Tregurtha OCX-6	M	6-7¼x8	....	175-1100	1981.0	4.00	1030-800	2	Se	HH	Spec	2.71	2.46	2.50	2.25	.531	.531	.437	.437	30
47	Palmer YT	M	1-3x3½	....	2-600	25.0	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
48	Palmer HH	M	2-3x4	....	5-900	56.5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
49	Palmer LH	M	4-3x4	....	15-1500	113.0	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
50	Palmer LLH	M	4-3¼x4	....	25-2000	133.0	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
51	Palmer PAL	M	4-4x5	....	45-2000	251.0	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
52	Palmer PH	M	6-3¾x4¼	....	60-2000	282.0	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
53	Palmer PB	M	6-3½x4½	....	40-1800	260.0	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
54	Palmer SK	M	6-4½x6	....	80-1400	572.5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
55	Palmer GW-6	M	6-5½x7	....	150-1400	997.5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
56	Palmer GW-4	M	4-5½x7	....	80-1400	665.0	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
57	Palmer (6) PNR	M	4-5x6	....	24-600	472.0	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
58	Palmer (6) ZR	M	4-5½x6	....	40-800	572.0	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
59	Palmer (7) F	M	4-6⅜x8	....	35-400	1020.0	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
60	Palmer (7) NK	M	4-7½x10	....	50-400	1764.0	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
61	Palmer B-Ford	M	4-3⅞x4¼	....	40-2000	200.5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
62	Palmer 40-V8	M	8-3 1/16x3¾	....	65-2500	221.0	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
63	Plymouth PT-57	T	6-3⅛x4⅜	23.4	70-3000	201.3	6.70	145-1200	6	In	L	Sil	1.46	1.46	1.31	1.31	.312	.312	.340	.340	45
64	Regal Y	M	1-3¼x3½	....	2-800	29.0	....	....-700	1	Se	L	CI	....	....	1.12	1.12	.312	.312	.312	.312	45
65	Regal OA	M	1-4x4½	....	4-800	56.0	....	....-650	1	Se	L	CI	....	....	1.50	1.50	.312	.312	.375	.375	45
66	Regal HA	M	1-4¾x5½	....	6-800	97.0	....	....	1	Se	L	CI	....	....	2.00	2.00	.375	.375	.375	.375	45
67	Regal EA	M	1-5¼x6½	....	7-600	141.0	....	....	1	Se	L	CI	....	....	2.12	2.12	.375	.375	.375	.375	45
68	Regal NB	M	2-4x4½	....	8-800	112.0	....	....	1	Se	L	CI	....	....	1.50	1.50	.312	.312	.375	.375	45
69	Regal (8) GB	M	2-4¾x6	....	16-1000	213.0	....	....-800	2	Se	L	CI	....	....	2.18	2.18	.375	.375	.375	.375	45
70	Regal KB	M	2-5½x7	....	16-600	332.0	....	....-500	....	Se	L	CI	....	....	2.37	2.37	.437	.437	.437	.437	45
71	Regal LB	M	2-6½x8	....	20-600	531.0	....	....-500	1	Se	L	CI	....	....	2.62	2.62	.437	.437	.500	.500	45
72	Regal SC	M	4-7½x9	....	50-400	1590.0	....	....	1	Se	L	CI	....	....	2.62	2.62	.375	.375	.562	.562	45
73	Reo S-140	T	4-3 3/16x4⅜	16.2	42-2800	140.0	5.40	98-1600	4	In	L	Sil	1.51	1.20	....	....	.292	.292	.312	.312	(h)
74	Reo S-209	T, B, Tr	6-3 3/16x4⅜	24.3	70-2800	209.0	5.40	145-1200	6	In	L	Sil	1.51	1.20	....	....	.284	.284	.312	.312	(h)
75	Reo S-228	T, B, Tr	6-3⅜x4¼	27.3	73-3000	228.0	5.40	150-(ee)	6	In	L	Sil	1.81	1.81	1.62	1.62	.312	.312	.343	.343	45
76	Reo S-268	T, B, Tr	6-3⅜x5	27.3	83-2800	268.0	5.58	178-1200	6	In	L	Sil	1.81	1.81	1.62	1.62	.312	.312	.343	.343	45
77	Reo S-309	T, B, Tr	6-3⅝x5	31.5	88-2800	309.0	5.44	204-800	6	In	L	Sil	1.81	1.81	1.62	1.62	.312	.312	.343	.343	45
78	Scripps F4	M	4-3¾x5	22.5	81-3000	220.0	6.10	....-1800	4	In	L	Sil	1.93	1.93	....	....	.406	.406	.375	.375	45
79	Scripps F6	M	6-3¾x5	33.7	120-3000	331.0	6.10	....-1800	6	In	L	Sil	1.93	1.93	....	....	.406	.406	.375	.375	45
80	Scripps 150, 1, 2, 3	M	6-4¼x5¼	43.3	165-3000	447.0	6.20	....-1800	2	Se	L	Sil	2.25	2.25	....	....	.375	.375	.437	.437	45
81	Scripps 154, 5, 6, 7	M	6-4¼x5¼	43.3	155-3000	447.0	6.20	....-2000	2	Se	L	Sil	2.25	2.25	....	....	.375	.375	.437	.437	45
82	Scripps 160, 1, 2, 3	M	6-4½x5¾	48.6	166-2400	549.0	5.20	....-1200	2	Se	L	Sil	2.37	2.28	....	....	.405	.405	.437	.437	45
83	Scripps 164, 5	M	6-4½x5¾	48.6	125-2000	549.0	5.20	....-1000	2	Se	L	Sil	2.37	2.28	....	....	.405	.405	.437	.437	45
84	Scripps 170, 1, 2, 3	M	6-4¾x5¾	54.1	186-2400	611.0	5.20	....	2	Se	L	Sil	2.37	2.28	....	....	.405	.405	.437	.437	45
85	Scripps 174, 5	M	6-4¾x5¾	54.1	146-2000	611.0	5.20	....	2	Se	L	Sil	2.37	2.28	....	....	.405	.405	.437	.437	45
86	Scripps 200, 1, 2, 3	M	6-5x5¾	60.0	212-2400	677.0	6.20	....	2	Se	L	Sil	2.56	2.28	....	....	.405	.405	.437	.437	45
87	Scripps 204, 5, 6, 7	M	6-5x5¾	60.0	165-2000	677.0	6.20	....	2	Se	L	Sil	2.56	2.28	....	....	.405	.405	.437	.437	45
88	Scripps V8	M	8-3 1/16x3¾	37.4	85-3400	221.0	6.16	....	8	In	L	Sil	1.53	1.53	....	....	.296	.296	.312	.312	45
89	Scripps V12-61	M	12-2¾x3¾	36.3	110-3900	267.0	6.70	186-2000	12	In	L	CNS	1.53	1.53	....	....	.292	.292	.311	.311	45
90	Scripps V12-63	M	12-2¾x3¾	36.3	110-3900	267.0	6.70	186-2000	12	In	L	CNS	1.53	1.53	....	....	.292	.292	.311	.311	45
91	Scripps V12-65	M	12-2¾x3¾	36.3	110-3900	267.0	6.70	186-2000	12	In	L	CNS	1.53	1.53	....	....	.292	.292	.311	.311	45
92	Scripps V12-67	M	12-2¾x3¾	36.3	110-3900	267.0	6.70	186-2000	12	In	L	CNS	1.53	1.53	....	....	.292	.292	.311	.311	45
93	Scripps V12-71	M	12-2¾x3¾	36.3	110-3900	267.0	6.70	186-2000	12	In	L	CNS	1.53	1.53	....	....	.292	.292	.311	.311	45
94	Scripps V12-73	M	12-2¾x3¾	36.3	110-3900	267.0	6.70	186-2000	12	In	L	CNS	1.53	1.53	....	....	.292	.292	.311	.311	45
95	Scripps V12-75	M	12-2¾x3¾	36.3	110-3900	267.0	6.70	186-2000	12	In	L	CNS	1.53	1.53	....	....	.292	.292	.311	.311	45
96	Scripps V12-77	M	12-2¾x ¾	36.3	110-3900	267.0	6.70	186-2000	12	In	L	CNS	1.53	1.53	....	....	.292	.292	.311	.311	45
97	Scripps 300, 1, 2, 3	M	12-4¼x5¼	86.7	304-2400	894.0	6.20	....-1800	2	Se	L	Sil	2.25	2.25	....	....	.375	.375	.437	.437	45

For abbreviations see pages 292 and 293

COMMERCIAL VEHICLE ENGINES—*Continued*

	PISTONS					CONNECTING RODS			CRANKSHAFT							SPARK PLUG		CARBURETOR				OVERALL DIMENSIONS (In.)			
Front End Drive—Type	Material	Length (In.)	Weight (with Pins, Rings and Bushing)—(Oz.)	Piston Pin—Diameter and Length (In.)	Number of Rings per Piston	Material	Center to Center Length (In.)	Weight—With Bushing and Caps (Oz.)	Material	Counterbalances Used	Crank-pin Diameter and Length (In.)	Main Bearings Number	Main Bearings Diameter and Length (In.) Front	Main Bearings Diameter and Length (In.) Rear	Oil Pressure To	Recommended Make	Thread Size	Make	Size	Adapted for Use of Kerosene or Distillate	Weight (Without Carburetor or Ignition)—Lb.	Width	Height	Length	Line Number
HI	CI	7.00	179.0	1.37x5.00	4	AS	12¼	96.0	CNS	N	1.87x2.75	5	2.25x5.00	2.25x4.00	abe	AC	⅞-18	Zen	1½	No	1750	25¾	22¼	68½	1
HI	CI	7.00	179.0	1.37x5.00	4	AS	12¼	96.0	CNS	N	2.12x2.75	7	2.62x5.00	2.62x4.00	abe	AC	⅞-18	Zen(2)	1½	No	2500	26½	22¾	90½	2
HI	CI	7.00	179.0	1.37x5.00	4	AS	12¼	96.0	CNS	N	2.12x2.75	7	2.62x5.00	2.62x4.00	abe	AC	⅞-18	Zen(2)	1½	No	2500	26½	22¾	88½	3
HI	Al	3.06	.....	.750x2.81	3	AS	6 9/16	.....	CNS	N	1.75x1.25	3	2.00x1.56	2.00x1.62	abe	AC	⅞-18	Zen	1†	No	440	17½	14⅜	40½	4
HI	Al	4.12	.....	1.00x3.50	3	AS	8	.....	CNS	N	2.00x1.50	3	2.00x2.18	2.00x2.62	abe	AC	⅞-18	Zen	1¼†	No	690	21⅞	16	51¼	5
HI	Al°	4.31	.....	1.00x3.50	4	AS	8	.....	CNS	N	2.00x1.50	7	2.50x1.31	2.50x2.12	abe	AC	⅞-18	Zen	1¼†	No	830	21⅛	17	51	6
HI	Als	3.87	.....	.750x2.85	3	SF	7	15.9	CAS	Y	2.00x1.93	3	2.40x1.56	2.40x2.25	abce	CH	18 mm.	Str	1†	No	670	23	30½	47½	7
HI	Als	3.27	14.6	.750x2.48	3	SF	7 13/32	22.5	CAS	Y	2.12x1.57	4	2.40x1.83	2.40x2.25	abce	CH	14 mm.	Str	1†	No	790	25	31½	60½	8
HI	AS	.....	.....	.....	3	SF	.....	.....	CAS	Y	.....	3	.....	.....	abce	CH	14 mm.	Str	1†	No	500	22¾	30½	47½	9
HI	Als	3.87	.....	.750x2.85	3	SF	7	15.9	CAS	Y	2.00x1.93	3	2.40x1.56	2.40x2.25	abce	CH	18 mm.	Win(2)	1¼†	No	500	21	25½	37	10
HI	CI	3.50	27.4	.750x2.81	3	CS	8	29.9	CS	N	1.75x1.50	3	1.87x1.56	1.87x1.18	abc	Op	⅞-18	Op	1	No	325	17	24½	37 1/16	11
HI	CI	4.50	45.7	.875x3.21	4	CS	9	41.6	CS	N	2.12x1.50	3	2.12x1.75	2.12x2.37	abce	Op	⅞-18	Op	1	No	485	19½	29	42	12
HI	CI	4.50	45.7	.875x3.21	4	CS	9	41.6	CS	N	2.12x1.50	3	2.12x1.75	2.12x2.37	abc	Op	⅞-18	Op	1	No	475	25¾	33	30¾	13
Ch	Als	3.75	21.9	.875x2.50	4	CS	9½	37.4	CS	Y	2.18x1.25	4	2.37x1.93	2.37x1.87	abc	Op	14 mm.	Op	1¼	No	525	23	29½	34½	14
HI	Al	4.25	36.0	1.00x3.21	4	CS	9	54.4	CS	Y	2.34x1.68	4	2.62x2.12	2.62x2.75	abcde	Op	18 mm.	Op	1½	No	785	25¾	31	42¾	15
Ch	CI	3.75	32.0	.875x2.59	4	CS	9½	38.7	CS	N	2.12x1.25	5	2.37x1.93	2.37x1.87	abcd	Op	18 mm.	Op	1½	No	680	22¾	29½	43	16
Ch	Als	3.75	21.9	.875x2.59	4	CS	9½	37.4	CS	N	2.12x1.25	5	2.37x1.93	2.37x1.87	abc	Op	14 mm.	Op	1	No	610	22¾	29½	43	17
Ch	Al	3.93	26.5	.875x2.59	4	CS	7⅝	31.6	CS	Y	2.00x1.18	3	2.50x1.75	2.50x2.25	abcdeg	Op	14 mm.	Op	1	No	550	22	34	34½	18
HI	Al	4.25	34.4	1.00x3.21	4	CS	9	54.4	CS	N	2.34x1.68	5	2.62x2.12	2.62x2.75	abcde	Op	18 mm.	Op	1¼	No	1110	25¾	34¼	52½	19
Ch	Als	3.75	21.9	.875x2.50	4	CS	9½	37.4	CS	Y	2.12x1.25	5	2.37x1.93	2.37x1.87	abc	Op	14 mm.	Op	1½	No	705	28¾	29½	41¾	20
Ch	Al	3.93	26.4	.875x2.59	4	CS	7⅝	31.6	CS	Y	2.00x1.18	3	2.50x1.75	2.50x1.75	abcdeg	Op	14 mm.	Op	1¼	No	565	22	32¼	34⅝	21
Ch	Als	3.87	23.0	.875x2.59	4	CS	9 7/16	40.8	CS	Y	2.50x1.25	4	3.00x2.56	3.00x2.37	abcdeg	Op	18 mm.	Op(2)	1¼	No	1085	26	35½	47	22
Ch	Al	3.87	25.6	.875x2.59	4	CS	9 7/16	40.8	CS	Y	2.50x1.25	4	3.00x2.56	3.00x2.37	abcdeg	Op	14 mm.	Op	1¼	No	1145	26	35½	47	23
Ch	Al	5.68	59.8	1.18x4.15	5	CS	9	75.5	CS	Y	3.00x1.62	4	6.00x2.12	6.00x2.12	abcdeg	Op	18 mm.	Op(2)	2	No	2600§	38⅝	53	89½	24
Ch	Al	5.68	59.8	1.18x4.15	5	CS	9	75.5	CS	Y	3.00x1.62	4	6.00x2.12	6.00x2.12	abcdeg	Op	18 mm.	Op(2)	2†	No	2350§	33	40	72	25
Ch	Al	5.68	59.8	1.18x4.15	5	CS	9	75.5	CS	Y	3.00x1.62	4	6.00x2.12	6.00x2.12	abcdeg	Op	18 mm.	Op(2)	2†	No	2650§	33	40	81¼	26
HI	Al	3.68	22.4	.750x2.81	3	CS	8	29.9	CS	N	1.75x1.50	3	1.87x1.56	1.87x1.81	abc	Op	18 mm.	Op	1¼†	No	400§	20	22¾	36	27
HI	Al	3.68	22.4	.750x2.81	3	CS	8	29.9	CS	N	1.75x1.50	3	1.87x1.56	1.87x1.81	abc	Op	18 mm.	Op	1¼†	No	425§	20	22¾	42⅛	28
HI	Al	3.75	20.0	.875x2.50	3	CS	9½	37.4	CS	Y	2.12x1.25	4	2.37x1.93	2.37x1.87	abce	Op	18 mm.	Op	1½†	No	682§	24½	26	41	29
HI	Al	3.75	20.0	.875x2.50	3	CS	9½	37.4	CS	Y	2.12x1.25	4	2.37x1.93	2.37x1.87	abce	Op	18 mm.	Op	1½†	No	735§	24½	26	45	30
HI	Al	3.75	21.1	.875x2.50	3	CS	9½	37.4	CS	Y	2.12x1.25	4	2.37x1.93	2.37x1.87	abce	Op	18 mm.	Op	1½†	No	690§	24½	26	44	31
HI	Al	3.75	21.1	.875x2.50	3	CS	9½	37.4	CS	Y	2.12x1.25	4	2.37x1.93	2.37x1.87	abce	Op	18 mm.	Op	1½†	No	743§	24½	26	48¾	32
HI	Al	3.75	21.1	.875x2.50	3	CS	9½	37.4	CS	Y	2.12x1.25	4	2.37x1.93	2.37x1.87	abce	Op	18 mm.	Op(3)	1½	No	590§	26½	28¾	41	33
HI	Al	3.75	20.0	.875x2.50	3	CS	9½	37.4	CS	N	2.12x1.25	5	2.37x1.93	2.37x1.87	abce	Op	18 mm.	Op(2)	1½†	No	915§	26¼	27½	51¾	34
HI	Al	3.75	20.0	.875x2.50	3	CS	9½	37.4	CS	N	2.12x1.25	5	2.37x1.93	2.37x1.87	abce	Op	18 mm.	Op(2)	1½†	No	1115§	26¼	27½	56	35
HI	Al	4.25	32.0	1.00x3.18	4	CS	9	45.6	CS	N	2.34x1.68	5	2.62x2.53	2.62x2.75	abce	Op	18 mm.	Op(2)	1½†	No	1170§	27	30	66½	36
HI	Al	4.25	32.0	1.00x3.18	4	CS	9	45.6	CS	N	2.34x1.68	5	2.62x2.52	2.62x2.75	abce	Op	18 mm.	Op(2)	1½†	No	1370§	27	30	72	37
HI	CI	5.50	102.0	1.25x4.25	4	CS	12	114.0	CS	N	2.37x2.87	3	2.25x3.18	2.25x4.00	abce	CH	⅞-18	Sch	1¼	K-D	1275	22½	47 3/16	42⅜	38
HI	CI	5.00	80.0	1.25x3.87	4	CS	10	96.0	CS	N	2.37x2.50	3	2.50x2.68	2.62x3.50	abcde	CH	⅞-18	Sch	1	K-D	1240	23½	43¾	46½	39
HI	CI	4.37	51.0	1.00x3.00	4	CS	9	54.0	CS	N	2.62x1.50	2	B-Ti	B-Ti	b	CH	18 mm.	Sch	1	K-D	660	19⅝	33 15/16	34⅝	40
HI	Al	.....	140.0	1.37x5.62	5	AS	15½	184.0	CNS	N	2.56x3.15	7	2.56x1.50	2.56x4.25	abcdem	CH	18 mm.	Str	2†	D	2400§	27⅝	52⅛	96¼	41
HI	Al	.....	182.0	1.25x6.18	5	AS	17 5/16	212.0	CNS	N	2.56x3.16	7	2.56x3.48	2.56x4.25	abcdeg	CA	18 mm.	Zen(2)	1½†	D	3050§	32⅝	52¼	100	42
HI	Al	.....	232.0	1.37x4.53	5	AS	15½	184.0	CNS	N	2.56x3.16	7	2.56x3.48	2.56x4.25	abcdeg	Bos	18 mm.	Sho(3)	1½†	K	3800§	32⅝	54⅞	100	43
HI	Al	.....	232.0	1.37x4.53	5	AS	15½	184.0	CNS	N	2.56x3.16	5	2.56x3.48	2.56x4.25	abcdeg	Bos	18 mm.	Sho(3)	1½†	K	2950§	32⅝	54⅞	80	44
HI	Al	.....	182.0	1.25x6.18	5	AS	17 5/16	212.0	CNS	N	2.56x3.16	5	2.56x3.48	2.56x4.25	abcdeg	CA	18 mm.	Hol	1½†	D	2450§	32⅝	52¼	80	45
HI	Al	.....	232.0	1.37x4.53	5	AS	15½	184.0	CNS	N	2.56x3.16	7	2.56x3.48	2.56x4.25	abcdeg	Bos	18 mm.	Sho(3)	2†	K	4050§	37 9/16	52¼	99	46
.....	CI	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	CH	⅞-18	Sch	¾	.....	98	.....	.....	.....	47
.....	CI	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	CH	⅞-18	Zen	⅞†	.....	280	.....	.....	.....	48
.....	CI	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	CH	⅞-18	Zen	1†	.....	375	.....	.....	.....	49
.....	CI	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	CH	⅞-18	Zen	1†	.....	400	.....	.....	.....	50
.....	CI	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	CH	⅞-18	Zen	1¼†	.....	750	.....	.....	.....	51
.....	CI	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	CH	⅞-18	Zen	1¼†	.....	950	.....	.....	.....	52
.....	CI	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	CH	⅞-18	Zen	1¼†	.....	1000	.....	.....	.....	53
.....	CI	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	CH	18 mm.	Zen	1½†	.....	1900	.....	.....	.....	54
.....	CI	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	CH	18 mm.	Hol	2†	.....	3000	.....	.....	.....	55
.....	CI	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	CH	18 mm.	Zen	1¼†	.....	2400	.....	.....	.....	56
.....	CI	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	CH	⅞-18	Zen	1¼†	.....	1250	.....	.....	.....	57
.....	CI	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	CH	⅞-18	Zen	1½†	.....	1300	.....	.....	.....	58
.....	CI	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	CH	⅞-18	En	1½†	.....	2400	.....	.....	.....	59
.....	CI	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	CH	⅞-18	En	2†	.....	4200	.....	.....	.....	60
.....	Al	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	CH	⅞-18	Zen	1†	.....	670	.....	.....	.....	61
.....	Al	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	CH	18 mm.	Str	†	.....	840	.....	.....	.....	62
Ch	Al	3.68	.....	.859x2.62	4	AS	7 11/16	31.3	CS	Y	1.93x1.00	4	2.25x1.23	2.25x1.87	abce	Au	14 mm.	CG	1¼	No	530	23¾	32 1/16	37 11/32	63
Sp	CI	3.50	.....	.718x3.00	3	AS	.....	.....	CS	Y	1.37x1.50	2	1.37x2.62	1.37x2.25	b	Op	⅞-18	Zen	¾	No	130	11½	14½	13½	64
Sp	CI	4.56	.....	1.84x3.75	4	CS	.....	.....	CS	Y	1.50x2.00	2	Ball Brg.	Ball Brg.	Splash	Op	⅞-18	Zen	1	No	245§	16	17⅝	21⅝	65
HI	CI	5.50	.....	1.09x4.50	4	.....	.....	.....	CS	Y	1.75x2.50	2	1.62x4.25	1.62x4.12	Splash	Op	⅞-18	Zen	.....	No	400§	17	22½	24½	66
Sp	CI	6.50	.....	1.21x5.00	4	CS	.....	.....	CS	Y	1.87x2.81	2	1.87x5.25	1.87x5.00	Splash	Op	⅞-18	.....	†	No	610	20	24¼	44⅜	67
Sp	CI	4.56	.....	1.84x3.75	4	.....	.....	.....	CS	Y	1.50x2.00	3	1.37x4.00	1.37x4.00	Splash	Op	⅞-18	Zen	1†	No	540§	16	17⅝	42	68
HI	CI	5.50	.....	1.09x4.50	4	CS	.....	.....	CS	Y	2.25x2.25	3	2.25x5.00	2.25x5.00	Splash	Op	⅞-18	Str	1¼†	K-D	900	20	24	47¾	69
HI	CI	7.00	.....	1.21x5.25	4	CS	.....	.....	CS	Y	2.37x2.81	3	2.37x4.00	2.37x4.00	Splash	Op	⅞-18	Str	1¼†	K-D	1200	21¾	25½	52 9/16	70
Sp	CI	8.00	.....	1.59x6.25	4	CS	.....	.....	CS	Y	2.37x3.37	3	2.37x5.00	2.37x5.00	Splash	Op	⅞-18	Str	1½†	K-D	1850	23½	30½	63	71
Sp	CI	9.87	.....	2.00x7.25	5	CS	.....	.....	CS	N	3.00x3.25	5	2.75x6.00	2.18x5.50	ML	Op	⅞-18	.....	†	D	4600	28¼	96½	37	72
Ch	Al	3.56	17.5	.859x2.69	4	CS	7	26.0	CS	....	1.93x1.31	3	2.25x1.25	2.25x1.68	abc	CH	14 mm.	Car	1¼	No	400	.....	.....	.....	73
Ch	Al	3.56	17.5	.859x2.69	4	CS	7	26.0	CS	....	1.93x1.31	4	2.25x1.25	2.25x1.68	abc	CH	14 mm.	Car	1¼	No	500	.....	.....	.....	74
Ch	Al	4.00	23.0	.983x2.90	4	CS	10½	44.0	CS	....	2.18x1.50	7	2.62x1.93	2.62x2.46	abc	CH	14 mm.	Car	1¼	No	700	.....	.....	.....	75
Ch	Al	4.00	23.0	.983x2.90	4	CS	10½	44.0	CS	....	2.18x1.50	7	2.62x1.93	2.62x2.46	abc	CH	14 mm.	Car	1½	No	700	.....	.....	.....	76
Ch	Al	4.50	28.0	.983x3.12	4	CS	10½	44.0	CS	....	2.18x1.50	7	2.62x1.93	2.62x2.46	abc	CH	14 mm.	Cra	1½	No	760	.....	.....	.....	77
HI	Al	4.25	33.0	1.12x3.25	4	Dur	10½	41.0	NS	N	2.18x1.87	3	2.25x2.62	2.25x2.62	abc	CH	18 mm.	Str	1¼†	No	660	23	28 13/16	45¼	78
HI	Al	4.25	33.0	1.12x3.25	4	Dur	10½	41.0	NS	Y	2.18x1.87	4	2.25x2.62	2.25x2.62	abc	CH	18 mm.	Zen	1½†	No	900	19¾	29 1/16	56½	79
HI	Al	5.12	49.0	1.25x3.68	4	AS	10⅞	70.0	NS	Y	2.75x2.25	4	3.25x2.25	3.25x2.25	abc	CH	18 mm.	Hol	2†	No	1050	27¾	32 5/16	56¾	80
HI	Al	5.12	49.0	1.25x3.68	4	AS	10⅞	70.0	NS	Y	2.75x2.25	4	3.25x2.25	3.25x2.25	abc	CH	18 mm.	Str	2†	No	1050	24¾	29⅜	56¾	81
HI	Al	5.12	50.0	1.37x3.84	4	AS	11¼	84.0	NS	Y	2.87x2.00	4	3.00x3.00	3.00x3.62	ab	CH	18 mm.	Hol	1½†	No	1295	26¼	39 9/16	66	82
HI	Al	5.12	50.0	1.37x3.84	4	AS	11¼	84.0	NS	Y	2.87x2.00	4	3.00x3.00	3.00x3.62	ab	CH	18 mm.	Sch	1½†	No	1295	33½	33 7/16	66	83
HI	Al	5.12	56.0	1.37x4.00	4	AS	11¼	84.0	NS	Y	2.87x2.00	4	3.00x3.00	3.00x3.62	ab	CH	18 mm.	Hol	2†	No	1295	26¼	36 9/16	66	84
HI	Al	5.12	56.0	1.37x4.00	4	AS	11¼	84.0	NS	Y	2.87x2.00	4	3.00x3.00	3.00x3.62	ab	CH	18 mm.	Sch	1½†	No	1295	33½	33 7/16	66	85
HI	Al	5.37	62.0	1.37x4.00	4	AS	11¼	84.0	NS	Y	2.87x2.00	4	3.00x3.00	3.00x3.62	ab	CH	18 mm.	Hol	2†	No	1295	26¼	36 9/16	66	86
HI	Al	5.37	62.0	1.37x4.00	4	AS	11¼	84.0	NS	Y	2.87x2.00	4	3.00x3.00	3.00x3.62	ab	CH	18 mm.	Sch	1½†	No	1295	33½	33 7/16	66	87
HI	Al	.....	.....	.....	...	AS	.....	.....	CS	Y	.....	3	.....	.....	abc	CH	18 mm.	Str	1(2)	No	660	23½	31⅛	42⅝	88
HI	AS	3.27	14.6	.750x2.48	3	SF	7 13/32	22.5	CAS	Y	2.12x1.57	4	2.40x1.83	2.40x2.25	abc	CH	14 mm.	CG	1†	No	.....	25⅜	29⅞	49 13/16	89
HI	AS	3.27	14.6	.750x2.48	3	SF	7 13/32	22.5	CAS	Y	2.12x1.57	4	2.40x1.83	2.40x2.25	abc	CH	14 mm.	CG	1†	No	.....	25⅜	29⅞	49 13/16	90
HI	AS	3.27	14.6	.750x2.48	3	SF	7 13/32	22.5	CAS	Y	2.12x1.57	4	2.40x1.83	2.40x2.25	abc	CH	14 mm.	CG	1†	No	.....	25⅜	31¼	49 13/16	91
HI	AS	3.27	14.6	.750x2.48	3	SF	7 13/32	22.5	CAS	Y	2.12x1.57	4	2.40x1.83	2.40x2.25	abc	CH	14 mm.	CG	1†	No	.....	25⅜	31¼	49 13/16	92
HI	AS	3.27	14.6	.750x2.48	3	SF	7 13/32	22.5	CAS	Y	2.12x1.57	4	2.40x1.83	2.40x2.25	abc	CH	14 mm.	CG	1†	No	.....	25⅜	29⅞	57¾	93
HI	AS	3.27	14.6	.750x2.48	3	SF	7 13/32	22.5	CAS	Y	2.12x1.57	4	2.40x1.83	2.40x2.25	abc	CH	14 mm.	CG	1†	No	.....	25⅜	29⅞	57¾	94
HI	AS	3.27	14.6	.750x2.48	3	SF	7 13/32	22.5	CAS	Y	2.12x1.57	4	2.40x1.85	2.40x2.25	abc	CH	14 mm.	CG	1†	No	.....	25⅜	31¼	57¾	95
HI	AS	3.27	14.6	.750x2.48	3	SF	7 13/32	22.5	CAS	Y	2.12x1.57	4	2.40x1.23	2.40x2.25	abc	CH	14 mm.	CG	1†	No	.....	25⅜	31¼	57¾	96
HI	Al	5.12	49.0	1.25x3.68	4	AS	10⅞	164.0φ	NS	Y	2.75x2.25	4	3.25x2.83	3.25x2.25	abc	CH	18 mm.	Hol	2†	No	1700	35	33¾	58½	97

For abbreviations see pages 292 and 293

AMERICAN STOCK, MARINE AND

Line Number	MAKE AND MODEL	Designed for	Number of Cylinders Bore and Stroke (In.)	Rated Hp. (A.M.A.)	Maximum Brake Hp. at Specified R.P.M.	Piston Displacement (Cu. In.)	Compression Ratio	Maximum Torque at R.P.M. (Lb. Ft.)	No. of Cylinders Cast In One Piece	Crankcase—Upper Half Integral with Cylinders	VALVES Arrangement	Exhaust Head Material or S.A.E. No.	Max. Head Diameter (In.) Intake	Max. Head Diameter (In.) Exhaust	Min. Port Diameter (In.) Intake	Min. Port Diameter (In.) Exhaust	Lift (In.) Intake	Lift (In.) Exhaust	Stem Diameter (In.) Intake	Stem Diameter (In.) Exhaust	Seat Angle (Degrees)
1	Scripps.....304, 5, 6, 7	M	12-4¼x5¼	86.7	280-2400	894.0	6.20	-1600	2	Se	L	Sil	2.25	2.25	.....	.....	.375	.375	.437	.437	45
2	Seaman.....EM-2	M	2-2½x2½	5.0	12-4000	24.5	.....	20-1000	2	Se	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3	Seaman.....EM-4	M	4-2½x2½	10.0	24-4000	49.0	.....	20-2600	2	Se	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4	Seaman.....E-2 & EV-4	Ind	2-2½x2½	5.0	12-4000	24.5	.....		2	Se	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5	Speedway.....R	M	6-7x8½	.....	310-1300	1963.0	4.20	1480-800	1	Se	I	Sil	2.25	2.25	.....	.....	.500	.500	.562	.562	45
6	Speedway.....K	M	4-4x4½	.....	28-1400	226.0	4.00	125-900	2	Se	L	Tun	1.75	1.75	.....	.....	.343	.343	.375	.375	45
7	Speedway.....MC	M	6-5¾x7	.....	250-1800	1092.0	5.00	825-1400	2	Se	L	Spec	2.50	2.50	.....	.....	.562	.562	.531	.531	45
8	Speedway.....MP	M	6-5¾x7	.....	190-1300	1092.0	4.30	780-1000	2	Se	L	Tun	2.50	2.50	.....	.....	.562	.562	.531	.531	45
9	Speedway.....SW	M	6-4⅛x4½	.....	95-2500	360.8	5.70	250-1000	6	In	L	Sil	1.62	1.50	.....	.....	.....	.....	.....	.....	45
10	Speedway.....SWX	M	6-4¼x4¾	.....	115-2500	404.6	5.30	265-1100	6	In	L	Sil	1.62	1.50	.....	.....	.....	.....	.....	.....	45
11	Speedway.....S	M	6-4¼x6	.....	100-1800	511.0	5.00	346-1300	2	Se	L	Sil	1.87	1.75	.....	.....	.406	.437	.437	.437	45
12	Speedway.....P	M	6-6¾x8½	.....	115-600	1825.0	3.80	1070-300	2	Se	L	Sil	2.62	2.62	.....	.....	.468	.468	.562	.562	45
13	Sterling.....D2-12	M	2-5½x7	24.2	15-500	332.6	.....	157-500	2	Se	L	Sil	2.06	2.06	.....	.....	.375	.375	.437	.437	45
14	Sterling.....Petrel L-6	M	6-5¼x6	66.1	115-1200	780.0	4.30	504-1200	6	Se	L	Sil	2.25	2.25	.....	.....	.455	.455	.437	.437	45
15	Sterling.....Petrel L-6	M	6-5¼x6	66.1	145-1500	780.0	4.68	507-1500	6	Se	L	Sil	2.25	2.25	.....	.....	.455	.455	.437	.437	45
16	Sterling.....Petrel L-6	M	6-5¼x6	66.1	145-1500	780.0	4.68	507-1500	6	Se	L	Sil	2.25	2.25	.....	.....	.455	.455	.437	.437	45
17	Sterling.....Petrel L-6-6	M	6-5¼x6	66.1	180-1800	780.0	5.00	525-1800	6	Se	L	Sil	2.25	2.25	.....	.....	.455	.455	.437	.437	45
18	Sterling.....Petrel Reduction L	M	6-5¼x6	66.1	175-1800	780.0	4.68	525-1800	6	Se	L	Sil	2.25	2.25	.....	.....	.455	.455	.437	.437	45
19	Sterling.....Petrel L-6	M	6-5¼x6	66.1	200-2000	780.0	5.54	525-2000	6	Se	L	Sil	2.25	2.25	.....	.....	.455	.455	.437	.437	45
20	Sterling.....Petrel L-6	M	-6-5¼x6	66.1	225-2200	780.0	5.50	537-2200	6	Se	L	Sil	2.25	2.25	.....	.....	.455	.455	.437	.437	45
21	Sterling.....Chevron 6	M	6-5½x6¾	72.6	85-800	962.0	.....	558-800	2	Se	T	Sil	2.25	2.25	.....	.....	.375	.375	.500	.500	45
22	Sterling.....Chevron 6	M	6-5½x6¾	72.6	130-1200	962.0	.....	570-1200	2	Se	T	Sil	2.25	2.25	.....	.....	.375	.375	.500	.500	45
23	Sterling.....Chevron 6	M	6-5½x6¾	72.6	150-1500	962.0	.....	525-1500	2	Se	T	Sil	2.25	2.25	.....	.....	.375	.375	.500	.500	45
24	Sterling. Dolphin Medium GRM-6	M	6-5¾x6¾	79.3	165-1200	1051.6	3.85	723-1200	2	Se	I	Sil	1.87	1.87	.....	.....	.375	.375	.437	.437	60
25	Sterling.....Dolphin 6 GR-6	M	6-5¾x6¾	79.3	225-1550	1051.6	4.08	787-1200	2	Se	I	Sil	1.87	1.87	.....	.....	.375	.375	.437	.437	60
26	Sterling.....Dolphin 6 GRS-6	M	6-5¾x6¾	79.3	300-2000	1051.6	4.70	829-1750	2	Se	I	Sil	1.87	1.87	.....	.....	.375	.375	.437	.437	60
27	Sterling.....(1) Coast Guard M-6	M	6-6¼x7¾	93.7	225-1200	1426.8	4.13	986-1200	6	Se	I	Sil	1.87	1.87	.....	.....	.483	.483	.437	.437	60
28	Sterling...(1) Coast Guard 6M-6	M	6-6¼x7¾	93.7	300-1550	1426.8	4.13	986-1200	6	Se	I	Sil	1.87	1.87	.....	.....	.483	.483	.437	.437	60
29	Sterling.....(1) Viking II T-6	M	6-8x9	153.6	190-600	2714.3	3.93	1670-600	6	Se	I	Sil	2.59	2.59	.....	.....	.556	.556	.562	.562	45
30	Sterling.....(1) Viking II T-6	M	6-8x9	153.6	300-900	2714.3	4.18	1755-900	6	Se	I	Sil	2.59	2.59	.....	.....	.556	.556	.562	.562	45
31	Sterling.....(1) Viking II 6T-6	M	6-8x9	153.6	425-1200	2714.3	4.18	1914-900	6	Se	I	Sil	2.59	2.59	.....	.....	.556	.556	.562	.562	45
32	Sterling....Dolphin Med. GRM-8	M	8-5¾x6¾	105.8	220-1200	1402.2	3.85	963-1200	2	Se	I	Sil	1.87	1.87	.....	.....	.375	.375	.437	.437	60
33	Sterling.....Dolphin 8GR-8	M	8-5¾x6¾	105.8	300-1550	1402.2	4.08	1050-1200	2	Se	I	Sil	1.87	1.87	.....	.....	.375	.375	.437	.437	60
34	Sterling.....(1) Viking 8T-8	M	8-8x9	204.8	250-600	3619.0	3.93	2190-600	8	Se	I	Sil	2.59	2.59	.....	.....	.556	.556	.562	.562	45
35	Sterling.....(1) Viking II 8T-8	M	8-8x9	204.8	400-900	3619.0	4.18	2420-900	8	Se	I	Sil	2.59	2.59	.....	.....	.556	.556	.562	.562	45
36	Sterling.....(1) Viking II 8T-8	M	8-8x9	204.8	565-1200	3619.0	4.18	2500-900	8	Se	I	Sil	2.59	2.59	.....	.....	.556	.556	.562	.562	45
37	Thorobred.....K	M	1-3¾x4¾	.....	5-1000	52.5	4.00	.....	1	Se	L	CI	1.62	1.62	1.43	1.43	.300	.300	.375	.375	45
38	Thorobred.....KK	M	2-3¾x4¾	.....	10-1100	105.0	4.00	.....	2	Se	L	CI	1.62	1.62	1.43	1.43	.300	.300	.375	.375	45
39	Thorobred.....D	M	4-2¾x4	.....	16-1800	95.0	4.66	.....	4	In	L	CAI	1.46	1.34	1.31	1.18	.250	.250	.312	.312	45
40	Thorobred.....Arrowhead Jr.	M	4-3¼x4	.....	35-2500	133.0	6.00	97-1300	4	In	L	CHS	1.34	1.34	1.18	1.18	.281	.281	.312	.312	45
41	Thorobred.....Arrowhead XH	M	4-3⅝x4½	.....	42-2250	186.0	4.60	.....	4	In	L	Sil	1.56	1.56	1.37	1.37	.302	.245	.375	.375	45
42	Thorobred.....AA	M	4-3¾x4¾	.....	24-1400	210.0	4.00	.....	2	Se	L	CI	1.62	1.62	1.43	1.43	.300	.300	.375	.375	45
43	Thorobred.....F	M	4-4 1/16x5	.....	36-1400	259.0	4.00	.....	4	Se	L	DC	1.93	1.93	1.75	1.75	.300	.300	.375	.375	45
44	Thorobred.....B	M	4-4½x5	.....	44-1800	318.0	4.00	.....	4	Se	L	DC	2.09	2.09	1.93	1.93	.300	.300	.375	.375	45
45	Thorobred.....BB-4	M	4-4½x6	.....	56-1600	382.0	4.00	.....	4	Se	L	DC	2.34	2.34	2.12	2.12	.300	.300	.437	.437	45
46	Thorobred.....BC-4	M	4-5x7	.....	56-1200	550.0	4.00	.....	2	Se	L	CAI	2.75	2.75	2.37	2.37	.375	.375	.625	.625	45
47	Thorobred.....BCS-4	M	4-5¾x7	.....	71-1100	727.0	4.00	.....	2	Se	L	CAI	2.75	2.75	2.37	2.37	.375	.375	.625	.625	45
48	Thorobred.....BC-Super-4	M	4-6x7	.....	78-1100	792.0	4.00	.....	2	Se	L	CAI	2.75	2.75	2.37	2.37	.375	.375	.625	.625	45
49	Thorobred.....Hiawatha	M	6-3¾x4¼	.....	84-3000	282.0	.....	188-1100	6	In	L	Sil	1.68	1.43	1.50	1.25	.375	.375	.375	.375	45
50	Thorobred.....Arrow Super-6	M	6-4¼x4¾	.....	90-2200	404.0	.....	274-900	6	In	L	Sil	1.87	1.56	1.62	1.34	.312	.312	.375	.375	45
51	Thorobred.....BB6	M	6-4½x6	.....	80-1725	572.5	4.00	.....	6	Se	L	DC	2.34	2.34	2.12	2.12	.300	.300	.437	.437	45
52	Thorobred.....BBS6	M	6-5x6	.....	101-1500	707.0	4.00	.....	6	Se	L	DC	2.34	2.34	2.12	2.12	.300	.300	.437	.437	45
53	Thorobred.....BC6	M	6-5x7	.....	90-1100	825.0	4.00	.....	2	Se	L	CAI	2.75	2.75	2.37	2.37	.375	.375	.625	.625	45
54	Thorobred.....BCS6	M	6-5¾x7	.....	112-1100	1091.0	4.00	.....	2	Se	L	CAI	2.75	2.75	2.37	2.37	.375	.375	.625	.625	45
55	Thorobred.....BC Super-6	M	6-6x7	.....	124-1100	1187.5	4.00	.....	2	Se	L	CAI	2.75	2.75	2.37	2.37	.375	.375	.625	.625	45
56	Universal.....W	M	1-4⅜x4½	.....	8-1200	67.8	4.60	-680	1	In	L	CNS	1.87	1.87	.....	.....	.250	.250	.375	.375	45
57	Universal.....AFT	M	2-3x3½	.....	10-2000	49.5	5.75	-180	2	In	L	CNS	1.50	1.50	.....	.....	.250	.250	.375	.375	45
58	Universal.....BN	M	4-2¾x4	.....	20-2000	95.0	5.00	.....	4	In	L	CNS	1.12	1.12	.....	.....	.234	.234	.312	.312	45
59	Universal.....AF	M	4-3x3½	.....	40-3500	99.0	6.00	.....	4	In	L	Sil	1.50	1.50	.....	.....	.312	.312	.375	.375	45
60	Universal.....LSG	M	4-3¼x4½	.....	48-3000	149.3	5.70	.....	4	Se	L	CNS	1.37	1.37	.....	.....	.312	.312	.375	.375	45
61	Universal.....AMS	M	6-3x3½	.....	60-3500	148.5	6.00	.....	6	In	L	Sil	1.50	1.50	.....	.....	.312	.312	.375	.375	45
62	Universal.....HCS	M	6-3½x4½	.....	90-3000	260.0	5.75	.....	6	Se	L	Sil	1.50	1.50	.....	.....	.328	.328	.375	.375	45
63	Universal.....CE	M	8-3½x4½	.....	90-2500	347.0	5.70	.....	8	Se	L	Sil	1.50	1.50	.....	.....	.328	.328	.375	.375	45
64	Vimalert.....V-690	M	12-4⅝x5⅛	.....	120-1800	688.0	8.00	308-1400	4	Se	I	Sil	1.68	1.68	1.68	1.68	.420	.420	.625	.625	30
65	Vimalert.....M-12	M	12-5x7	.....	420-2000	1650.0	5.25	1286-1400	1	Se	I	Sil	2.73	2.73	2.25	2.25	.437	.375	.435	.435	30
66	Vimalert.....Duplex Unit	M	Note—Co	nsists	of Two M	odel M	-12 E	ngines.	Ge	ar b	ox b	etwee	n, dri	ving o	ne pr	opelle	r shaf	t.		We	ight
67	Vimalert.....V2500-1	M	12-6⅜x6½	.....	760-2200	2539.5	6.00	2210-1500	6	Se	I	CNS	2.00	2.00	2.00	2.00	.500	.500	.406	.562	45
68	Waukesha.....FCS	T, Tr	4-2¾x4	12.1	26-2600	95.0	4.85	67-1100	4	In	L	Sil	1.34	1.34	1.18	1.18	.281	.281	.312	.312	45
69	Waukesha.....FC	T, Tr	4-3¼x4	16.9	35-2600	133.0	5.58	92-1200	4	In	L	Sil	1.34	1.34	1.18	1.18	.281	.281	.312	.312	45
70	Waukesha.....XAH	T, B, Tr	4-3⅝x4½	21.0	37-2200	186.0	4.60	121-900	4	In	L	Sil	1.56	1.56	1.37	1.37	.281	.281	.375	.375	45
71	Waukesha.....VIM	Tr	4-4¼x5¼	29.0	52-1600	298.0	4.30	200-1000	4	In	I	Sil	2.00	1.75	1.75	1.75	.400	.400	.375	.375	45
72	Waukesha.....VIK	Tr	4-4½x5¼	34.2	54-1500	334.0	4.75	205-1000	4	In	I	Sil	2.00	1.75	1.75	1.75	.400	.400	.375	.375	45
73	Waukesha.....CHS	Tr	4-4¾x6¼	36.1	61-1400	443.0	4.20	274-900	4	In	I	Sil	2.37	2.37	2.12	2.12	.437	.437	.437	.437	45
74	Waukesha.....CHK	Tr	4-5⅛x6¼	42.0	71-1400	516.0	4.20	320-900	4	In	I	Sil	2.37	2.37	2.12	2.12	.437	.437	.437	.437	45
75	Waukesha.....WK	Ind	4-6¾x8	73.0	120-950	1145.0	4.00	762-600	2	Se	L	Sil	3.00	3.00	2.75	2.75	.500	.500	.562	.562	30
76	Waukesha.....WOK	Ind	4-7½x8	90.0	163-950	1414.0	4.16	980-700	4	Se	I	Sil	3.25	2.75	3.00	2.50	.756	.756	.562	.562	30
77	Waukesha.....6BL	T, B, Tr	6-3½x4¼	29.4	72-2800	245.0	5.70	166-1100	6	In	L	Sil	1.68	1.43	1.50	1.25	.375	.375	.375	.375	45
78	Waukesha.....6BM	T, B, Tr	6-3⅝x4¼	31.5	77-2800	263.0	5.70	176-1100	6	In	L	Sil	1.68	1.43	1.50	1.25	.375	.375	.375	.375	45
79	Waukesha.....6BK	T, B, Tr, Ind	6-3¾x4¼	33.8	82-2800	282.0	5.70	185-1100	6	In	L	Sil	1.68	1.43	1.50	1.25	.375	.375	.375	.375	45
80	Waukesha.....6BZ	T, B, Tr	6-4x4¼	38.4	85-2800	320.0	5.10	210-1200	6	In	L	Sil	1.68	1.43	1.50	1.25	.375	.375	.375	.375	45
81	Waukesha.....6ML	T, B, Tr	6-4x4¾	38.4	78-2500	358.0	5.10	234-900	6	In	L	Sil	1.84	1.56	1.62	1.37	.312	.312	.375	.375	45
82	Waukesha.....6MK	T, B, Tr	6-4⅛x4¾	40.8	89-2500	381.0	5.10	264-900	6	In	L	Sil	1.84	1.56	1.62	1.37	.312	.312	.375	.375	45
83	Waukesha.....6MZ	T, B, Tr, Ind	6-4¼x4¾	41.0	95-2500	404.0	5.35	280-800	6	In	L	Sil	1.84	1.56	1.62	1.37	.312	.312	.375	.375	45
84	Waukesha.....6-110	T, B, Ind	6-4x4¾	38.4	106-2500	358.0	5.10	254-1200	6	Se	F	Sil	2.18	1.87	1.87	1.62	.500	.437	.437	.437	45
85	Waukesha.....6SRL	T, B, Tr, Ind	6-4⅜x5⅛	46.0	101-2250	462.0	4.50	302-700	6	Se	L	Sil	1.90	1.65	1.62	1.37	.343	.375	.375	.375	30
86	Waukesha.....6SRK	T, B, Tr, Ind	6-4⅝x5⅛	51.3	110-2250	517.0	4.50	330-800	6	Se	L	Sil	1.90	1.65	1.62	1.37	.343	.375	.375	.375	30
87	Waukesha.....6-125	T, B, Ind	6-4⅜x5⅛	46.0	123-2300	462.0	5.00	324-1000	6	Se	F	Sil	2.31	1.87	2.12	1.62	.540	.420	.437	.437	45
88	Waukesha.....6GAL	T, B, Ind	6-5x5½	60.0	136-2000	648.0	5.00	468-700	6	In	I	Sil	2.21	1.75	2.00	1.50	.500	.500	.437	.437	45
89	Waukesha.....6GAK	T, B, Ind	6-5½x5½	72.5	155-2000	784.0	4.80	567-700	6	In	I	Sil	2.21	1.75	2.00	1.50	.500	.500	.437	.437	45
90	Waukesha.....6RB	T, B	6-5x5¾	60.0	125-2000	677.0	4.75	441-600	2	Se	L	Sil	2.40	2.40	2.12	2.12	.375	.375	.437	.437	45
91	Waukesha.....6EK	Ind	6-7x7	117.6	190-1125	1616.0	4.00	950-550	6	In	I	Sil	2.75	2.25	2.50	2.25	.718	.718	.562	.562	30
92	Waukesha.....6LS	Ind	6-7x8½	117.6	240-1050	1962.0	3.80	1310-720	1	Se	L	Sil	3.00	2.75	2.75	2.50	.740	.825	.562	.562	30
93	Waukesha.....6LK	Ind	6-7¾x8½	144.0	291-1050	2406.0	3.70	1610-700	1	Se	L	Sil	3.00	2.75	2.75	2.50	.740	.825	.562	.562	30
94	Waukesha.....6LRO	Ind	6-8½x8½	173.4	343-1050	2894.0	3.80	1860-700	3	Se	I	Sil	3.50	3.00	3.25	2.75	.750	.840	.562	.562	30
95	White.....362	T	6-3⅞x5⅛	36.0	116-3000	362.0	5.85	280-1200	6	In	L	Aus	1.68	1.68	1.43	1.50	.381	.381	.406	.406	(h)
96	White.....529	T	6-4⅝x5¼	51.3	130-2400	529.0	5.00	365-1200	6	Se	I	CNS	2.12	2.03	1.87	1.81	.381	.381	.437	.500	45
97	White.....250	T, Tr	6-3 7/16x4½	28.4	68-2600	250.0	5.80	165-(t)	6	In	L	Sil	1.69	1.62	1.50	1.37	.396	.396	.375	.375	45

For abbreviations see pages 292 and 293

COMMERCIAL VEHICLE ENGINES—*Continued*

Front End Drive—Type	PISTONS Material	PISTONS Length (In.)	PISTONS Weight (with Pins, Rings and Bushing)—(Oz.)	PISTONS Piston Pin Diameter and Length (In.)	Number of Rings per Piston	CONNECTING RODS Material	CONNECTING RODS Center to Center Length (In.)	CONNECTING RODS Weight—With Bushing and Cap (Oz.)	CRANKSHAFT Material	CRANKSHAFT Counterbalances Used	CRANKSHAFT Crank-pin Diameter and Length (In.)	CRANKSHAFT Main Bearings Number	Main Bearings Diameter and Length (In.) Front	Main Bearings Diameter and Length (In.) Rear	Oil Pressure To	SPARK PLUG Recommended Make	SPARK PLUG Thread Size	CARBURETOR Make	CARBURETOR Size	Adapted for Use of Kerosene or Distillate	Weight (without Carburetor or Ignition)—Lb.	OVERALL DIMENSIONS (In.) Width	OVERALL DIMENSIONS (In.) Height	OVERALL DIMENSIONS (In.) Length	Line Number
HI	Al	5.12	49.0	1.25x3.68	4	AS	10⅞	164.0ϕ	NS	Y	2.75x2.25	4	3.25x2.25	3.25x2.25	abc	CH	18 mm.	Hol	2†	No	1700	33¼	30 11/16	58½	1
.....	Ala	.....	.....	.850x	3	AS	7⅜	.....	AS	Y	1.50x1.87	2	1.37xB-Ti	B-Ti	b	Op	18 mm.	Op	1	K	100	.....	.....	.....	2
.....	Ala	.....	.....	.850x	3	AS	7⅜	.....	AS	Y	1.50x1.87	2	1.37xB-Ti	B-Ti	b	Op	18 mm.	Op	1	K	180	.....	.....	.....	3
.....	Ala	7.25	16.0	.850x	3	AS	7⅜	.....	AS	Y	1.50x	2	1.37xB-Ti	B-Ti	b	Op	18 mm.	Op	1	K	.....	12	20	.....	4
HI	Cl	.....	.....	1.87x5.50	4	AS	19	.....	CNS	N	3.50x4.12	7	3.50x4.12	3.50x4.12	abcde	CH	⅞-18	Str(2)	2†	No	4000	36	55 3/16	111½	5
HI	Cl	4.37	.....	1.00x3.75	3	AS	9 29/32	.....	CNS	N	1.75x2.25	3	1.75x3.25	1.75x3.25	Splash	CH	⅞-18	Str	1†	No	550	20⅝	23⅝	53½	6
HI	Al	6.12	84.4	1.37x5.37	6	AS	15½	.....	CNS	Y	2.62x3.00	7	2.62x3.00	2.62x3.00	abcde	CH	⅞-18	Str(2)	2†	No	2100	29⅞	39½	88 1/16	7
HI	Cl	6.25	.....	1.37x5.37	4	AS	15 17/32	.....	CNS	N	2.62x3.00	7	2.62x3.00	2.62x3.00	abcde	CH	⅞-18	Str(2)	2†	No	2025	29⅞	39½	88 1/16	8
HI	Al	.....	.....	1.12x2.68	4	AS	9⅛	.....	CNS	Y	2.25x1.50	7	2.62x2.75	2.62x1.75	abcde	CH	14 mm.	Str	1½†	No	1100	23	28⅜	54¾	9
HI	Al	.....	.....	1.12x2.68	4	AS	9⅛	.....	CNS	Y	2.25x1.50	7	2.62x2.75	2.62x1.75	abcde	CH	14 mm.	Str	1½†	No	1150	23	28⅜	54¾	10
HI	Al	5.00	.....	1.18x4.00	4	AS	13½	.....	CNS	Y	2.75x2.12	7	2.75x2.12	2.75x2.18	abcde	CH	⅞-18	Str(2)	1½†	No	1250	22 3/16	31½	70	11
HI	Cl	8.25	.....	1.62x6.37	4	AS	20	.....	CNS	N	2.87x3.62	7	2.87x3.62	2.87x3.62	abcde	CH	⅞-18	Str	2†	No	4800	34¼	48¼	103¼	12
HI	Cl	6.00	140.0	1.25x5.12	4	CS	12½	96.0	CNS	Y	2.25x2.62	3	2.25x4.62	2.25x4.75	abc	CH	½ pipe	Sch	1½†	No	1100	24	36½	53⅞	13
HI	Al	5.50	94.0	1.43x4.37	4	CS	12½	113.0	CNS	Y	2.50x2.12	7	3.00x1.75	3.00x2.87	abcdef	CH	⅞-18	Zen(2)	1½†	No	1400	27½	33½	71¾	14
HI	Al	5.50	94.0	1.43x4.37	4	CS	12½	113.0	CNS	Y	2.50x2.12	7	3.00x1.75	3.00x2.87	abcdef	CH	⅞-18	Zen(2)	1½†	No	1400	27½	33½	71¾	15
HI	Al	5.50	94.0	1.43x4.37	4	CS	12½	113.0	CNS	Y	2.50x2.12	7	3.00x1.75	3.00x2.87	abcdef	CH	⅞-18	Zen(2)	1½†	No	1850	27½	33½	71¾	16
HI	Al	5.50	94.0	1.43x4.37	4	CS	12½	113.0	CNS	Y	2.50x2.12	7	3.00x1.75	3.00x2.87	abcdef	CH	⅞-18	Zen(2)	1¾†	No	1400	27½	33½	71¾	17
HI	Al	5.50	94.0	1.43x4.37	4	CS	12½	113.0	CNS	Y	2.50x2.12	7	3.00x1.75	3.00x2.87	abcdef	CH	⅞-18	Zen(2)	1½†	No	2000	27 7/16	23	81 1/16	18
HI	Al	5.50	94.0	1.43x4.37	4	CS	12½	113.0	CNS	Y	2.50x2.12	7	3.00x1.75	3.00x2.87	abcdef	CH	⅞-18	Zen(2)	1¾†	No	2000	27½	33½	71¾	19
HI	Al	5.50	94.0	1.43x4.37	4	CS	12½	113.0	CNS	Y	2.50x2.12	7	3.00x1.75	3.00x2.87	abcdef	CH	⅞-18	Zen(2)	1½†	No	2000	27½	33½	71¾	20
HI	Cl	6.00	140.0	1.25x5.12	5	CS	14	130.0	CNS	Y	2.50x3.00	4	2.50x4.37	2.50x4.37	abcdef	CH	‡⅞-18	Zen(2)	1¾†	No	2000	30½	36¼	87½	21
HI	Cl	6.00	140.0	1.25x5.12	5	CS	14	130.0	CNS	Y	2.50x3.00	4	2.50x4.37	2.50x4.37	abcdef	CH	‡⅞-18	Zen(2)	1¾†	No	2000	30½	36¼	87½	22
HI	Cl	6.00	140.0	1.25x5.12	5	CS	14	130.0	CNS	Y	2.50x3.00	4	2.50x4.37	2.50x4.37	abcdef	CH	‡⅞-18	Zen(2)	1¾†	No	2000	30½	36¼	87½	23
HI	Al	5.18	100.0	1.25x5.12	3	CS	14	130.0	CNS	Y	2.50x3.00	4	2.50x4.37	2.50x4.37	abcdef	CH	**⅞-18	Zen(2)	1¾†	No	2250	30½	45⅛	87½	24
HI	Al	6.06	100.0	1.25x5.12	3	CS	14	130.0	CNS	Y	2.50x3.00	4	2.50x4.37	2.50x4.37	abcdef	CH	**⅞-18	Zen(2)	1¾†	No	2000	30½	45⅛	87½	25
HI	Al	6.46	110.0	1.25x5.12	3	CS	14	130.0	CNS	Y	2.50x3.00	4	2.50x4.37	2.50x4.37	abcdef	CH	**⅞-18	Zen(2)	2½†	No	2175	30½	45⅛	87½	26
HI	Al	6.06	125.0	1.50x5.37	4	CS	14½	224.0	CNS	Y	3.00x3.12	7	3.25x2.62	3.25x3.68	abcdef	CH	‡‡⅞-18	SZ(2)	2½†	No	4000	31	49¼	102	27
HI	Al	6.42	129.0	1.50x5.37	4	CS	14½	224.0	CNS	Y	3.00x3.12	7	3.25x2.62	3.25x3.68	abcdef	CH	‡‡⅞-18	SZ(2)	2½†	No	3400	31	49¼	102	28
HI	Al	8.00	280.0	2.00x7.00	4	CS	18	416.0	CNS	Y	4.00x3.12	7	4.00x3.37	4.00x5.50	abcdef	CH	‡‡⅞-18	Zen(3)	2½†	No	7100	40⅛	72¾	121⅜	29
HI	Al	8.25	290.0	2.00x7.00	4	CS	18	416.0	CNS	Y	4.00x3.12	7	4.00x3.37	4.00x5.50	abcdef	CH	‡‡⅞-18	Zen(3)	2½†	No	7100	40⅛	72¾	121⅜	30
HI	Al	8.93	290.0	2.00x7.00	4	CS	18	416.0	CNS	Y	4.00x3.12	7	4.00x3.37	4.00x5.50	abcdef	CH	‡‡⅞-18	Zen(3)	2½†	D	7100	40⅛	72¾	121⅜	31
HI	Al	5.81	100.0	1.25x5.12	3	CS	14	130.0	CNS	Y	2.50 3.00	5	2.50x4.37	2.50x4.37	abcdef	CH	**⅞-18	Zen(2)	2½†	No	3400	30½	45⅛	104 9/16	32
HI	Al	6.06	100.0	1.25x5.12	3	CS	14	130.0	CNS	Y	2.50x3.00	5	2.50x4.37	2.50x4.37	abcdef	CH	**⅞-18	Zen(2)	2½†	No	3400	30½	45⅛	104 9/16	33
HI	Al	8.00	280.0	2.00x7.00	4	CS	18	416.0	CNS	Y	4.00x3.12	7	4.00x3.37	4.00x5.50	abcdef	CH	‡‡⅞-18	Zen(4)	2½†	No	9000	40⅛	72¾	142⅜	34
HI	Al	8.25	290.0	2.00x7.00	4	CS	18	416.0	CNS	Y	4.00x3.12	9	4.00x3.37	4.00x5.50	abcdef	CH	‡‡⅞-18	Zen(4)	2½†	No	9000	40⅛	72¾	142⅜	35
HI	Al	8.93	290.0	2.00x7.00	4	CS	18	416.0	CNS	Y	4.00x3.12	9	4.00x3.37	4.00x5.50	abcdef	CH	‡‡⅞-18	Zen(4)	2½†	D	9000	40⅛	72¾	142⅜	36
HI	Cl	4.12	64.5	1.10x3.25	3	CS	8½	43.0	CS	Y	1.50x2.12	2	1.50x3.00	1.50x3.00	Splash	AC	⅞-18	Str	¾†	K	210	19¼	22 7/16	21⅜	37
HI	Cl	4.12	64.5	1.10x3.25	3	CS	8½	43.0	CS	N	1.50x2.12	2	1.50x3.00	1.50x3.00	Splash	AC	⅞-18	Str	1†	K	415	19½	22 13/16	36¼	38
HI	Cl	3.00	19.0	.625x2.40	3	CS	8	27.0	CS	N	1.75x1.50	2	1.76x2.81	1.73x2.87	abe	AC	⅞-18	Str	1	K	330	15⅞	21⅛	35⅝	39
HI	Cl	3.50	29.0	.875x2.62	3	CS	7¼	32.0	CS	....	1.75x1.25	3	2.12x1.43	2.12x1.18	abcde	AC	18 mm.	Str	1†	K	490	21⅜	24 3/16	35	40
HI	Cl	3.93	45.0	1.10x3.06	4	CS	8¾	46.0	CS	N	2.00x1.50	3	2.00x2.50	2.00x1.87	abcde	AC	⅞-18	Str	1†	K	610	19⅛	26¼	41	41
HI	Cl	4.12	64.5	1.10x3.25	3	CS	8½	43.0	CS	N	1.50x2.12	3	1.50x3.00	1.50x3.00	abe	AC	⅞-18	Str	1	K	620	19½	22 13/16	46⅝	42
HI	Cl	4.75	68.5	1.10x3.56	4	CS	10⅜	66.0	CS	N	2.00x2.25	3	2.00x4.18	2.00x3.50	abe	AC	⅞-18	Str	1¼†	K	830	20¼	26 15/16	54⅜	43
HI	Cl	4.75	88.5	1.10x3.93	4	CS	10⅜	66.0	CS	N	2.00x2.25	3	2.00x4.18	2.00x3.50	abe	AC	⅞-18	Str	1½†	K	830	20¼	26 15/16	54⅜	44
HI	Cl	5.25	82.0	1.25x3.87	4	CS	11⅜	87.0	CS	N	2.56x2.25	5	2.56x4.25	2.56x4.25	abce	AC	⅞-18	Str	1½†	K	1175	22¾	27 1/16	62⅜	45
HI	Cl	6.00	126.0	1.43x4.68	4	CS	13¼	168.0	CS	N	2.56x3.00	5	2.62x4.50	2.62x4.50	abcde	AC	⅞-18	Str	2†	K	1720	25⅞	35½	77½	46
HI	Cl	6.00	150.0	1.43x5.25	4	CS	13¼	168.0	CS	N	2.56x3.00	5	2.62x4.50	2.62x4.50	abcde	AC	⅞-18	Str	2†	K	1730	25⅞	35½	77½	47
HI	Cl	6.00	190.0	1.43x5.50	4	CS	13¼	168.0	CS	N	2.56x3.00	5	2.62x4.50	2.62x4.50	abcde	AC	⅞-18	Str	2†	K	1740	25⅞	35½	77½	48
HI	Al	.....	.....	1.00x3.00	4	CS	8	.....	CS	N	2.00x1.50	7	2.62x2.00	2.62x1.25	abcde	AC	18 mm.	Str	.....	K	.....	22½	28¼	53 13/16	49
HI	Cl	.....	.....	1.00x4.00	4	CS	8¾	50.0	CS	N	2.25x1.50	7	2.62x2.75	2.62x1.62	abcde	AC	18 mm.	Str	1¼†	K	.....	20¼	27⅞	57 13/16	50
HI	Cl	5.25	82.0	1.25x3.87	4	CS	11⅜	87.0	CS	N	2.56x2.25	7	2.56x4.25	2.56x4.25	abce	AC	⅞-18	Str	1½†	K	1475	23⅜	30 9/16	75⅝	51
HI	Cl	5.25	106.0	1.25x4.31	4	CS	11⅜	87.0	CS	N	2.56x2.25	7	2.56x4.25	2.56x4.25	abce	AC	⅞-18	Str	2†	K	1565	24⅛	30 9/16	75⅝	52
HI	Cl	6.00	126.0	1.43x4.68	4	CS	13¼	168.0	CS	N	2.56x3.00	7	2.62x4.50	2.62x4.50	abcde	AC	⅞-18	Str	2†	K	2330	27⅛	35½	94½	53
HI	Cl	6.00	150.0	1.43x5.25	4	CS	13¼	168.0	CS	N	2.56x3.00	7	2.62x4.50	2.62x4.50	abcde	AC	⅞-18	Str	2†	K	2360	27⅛	35½	94½	54
HI	Cl	6.00	190.0	1.43x5.50	4	CS	13¼	168.0	CS	N	2.56x3.00	7	2.62x4.50	2.62x4.50	abcde	AC	⅞-18	Str	2†	K	2380	27⅛	35½	94½	55
Sp	Cl	4.65	.....	1.00x3.75	3	Dur	8½	.....	CS	Y	2.00x2.00	2	2.00x2.00	2.00x2.00	Splash	CH	18 mm.	Str	⅝	K-D	200	15 3/16	25 3/16	18 1/16	56
HI	Al	3.25	.....	.750x2.56	4	CS	7¼	.....	CS	Y	1.75x1.37	2	1.75x1.87	1.75x2.00	abc	CH	18 mm.	Str	⅝†	K-D	300	20 1/16	22⅝	27⅛	57
HI	Cl	3.25	.....	.625x2.44	3	CS	7½	.....	CS	Y	1.50x1.75	2	1.50x2.75	1.50x2.75	abc	CH	18 mm.	Zen	1†	K-D	377	17 1/16	17	34	58
HI	Al	3.25	.....	.750x2.56	4	Dur	7¼	.....	CS	Y	1.75x1.37	3	1.75x2.50	1.75x2.50	abcde	CH	18 mm.	Str	1¼†	No	.....	19	22	36¾	59
HI	Al	3.50	.....	.875x2.75	3	Dur	8½	.....	CS	N	2.00x1.75	3	2.00x2.50	2.00x2.50	abc	CH	18 mm.	Zen	1†	K-D	545	18½	25¼	39⅝	60
HI	Al	3.25	.....	.750x2.56	4	Dur	7¼	.....	CS	Y	1.75x1.37	4	1.75x2.50	1.75x2.50	abcde	CH	18 mm.	Str	1¼†	K-D	.....	20	22⅝	43⅞	61
HI	Al	3.87	.....	.875x3.00	4	Dur	8½	.....	CS	N	2.00x1.87	7	2.00x2.56	2.00x2.56	abc	CH	18 mm.	Zen	1½†	No	920	22	26⅛	49⅞	62
Ch	Cl	3.87	.....	.875x3.00	4	CS	8½	.....	CS	N	2.00x1.87	9	2.00x2.56	2.00x2.56	abc	CH	18 mm.	Zen	1¾†	No	1150	22	26	64⅛	63
.....	Al	5.40	72.0	1.18x4.12	7	AS	8⅞	(ff)	CNS	N	1.96x2.50	5	2.28x3.93	4.31x1.06x	abc	BG	18 mm.	Str	1½†	K-D	1150	28⅝	37⅛	47¼	64
.....	Ala	4.65	76.0	1.25x4.18	5	AS	12	(gg)	AS	N	2.37x2.50	7	2.62x4.62	2.62x2.00	abc	CH	18 mm.	Spec.	2†	No	1920	32¼	40¾	90¼	65
5400	lbs.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	66
.....	Ala	4.18	92.0	1.50x5.62	5	AS	11	(hh)	CNS	Y	3.25x2.87	8	3.50x2.87	3.50x1.62	abc	BG	18 mm.	Str	3⅛†	D	2800	42	53 5/16	95⅞	67
HI	Cl	3.25	26.0	.875x2.25	3	CS	7¼	29.0	CS	N	1.75x1.06	3	2.12x1.18	2.12x1.43	abcde	Op	18 mm.	Op	1	No	280	19	26¾	37⅜	68
HI	Cl	3.50	30.0	.875x2.75	3	CS	7¼	29.0	CS	N	1.75x1.06	3	2.12x1.18	2.12x1.43	abcde	Op	18 mm.	Op	1	No	290	19	26¾	37⅜	69
HI	Cl	3.93	45.0	1.12x3.03	4	CS	8¾	46.0	CS	N	2.00x1.50	3	2.00x1.87	2.00x2.50	abcde	Op	⅞-18	Op	1	K	385	17⅞	27	32¼	70
HI	Cl	4.87	76.0	1.31x3.87	4	CS	10½	86.0	CS	N	2.37x2.12	3	2.37x2.12	2.37x2.75	abcdeg	Op	⅞-18	Op	1¼	No	870	21¼	35	39	71
HI	Cl	4.87	85.0	1.31x4.06	4	CS	10¼	86.0	CS	N	2.37x2.12	3	2.37x2.12	2.37x2.75	abcdeg	Op	⅞-18	Op	1¼	K	925	21¼	35	39	72
HI	Cl	5.87	126.0	1.50x4.48	4	CS	11¾	141.0	CS	N	2.75x2.50	3	3.00x2.87	3.00x3.62	abcdeg	Op	⅞-18	Op	1½	K	1575	24	42	46⅛	73
HI	Cl	5.87	132.0	1.50x4.48	4	CS	11¾	141.0	CS	N	2.75x2.50	3	3.00x2.87	3.00x3.62	abcdeg	Op	⅞-18	Op	1½	K	1600	24	42	46⅛	74
HI	Cl	7.50	370.0	1.62x6.00	4	CS	18	278.0	CS	....	3.25x2.75	5	3.75x3.75	3.75x5.50	abcde	Op	⅞-18	Op	2	K	2750	34	51¾	59 7/16	75
HI	Cl	8.68	447.0	2.00x6.75	4	CS	18	278.0	CS	N	3.25x2.75	5	3.75x3.75	3.75x5.50	abcdeg	Op	⅞-18	Op	2½	No	3560	34¾	63½	59 7/16	76
HI	Cl	4.37	32.0	1.00x3.16	4	CS	8	40.0	CS	N	2.00x1.50	7	2.62x1.25	2.62x2.00	abcde	Op	18 mm.	Op	1½	No	675	26	31	39½	77
HI	Al	4.37	34.0	1.00x3.25	4	CS	8	40.0	CS	N	2.00x1.50	7	2.62x1.25	2.62x2.00	abcde	Op	18 mm.	Op	1½	No	685	26	31	39½	78
HI	Cl	4.37	37.0	1.00x3.50	4	CS	8	40.0	CS	N	2.00x1.50	7	2.62x1.25	2.62x2.00	abcde	Op	18 mm.	Op	1½	No	690	26	31	39½	79
HI	Al	4.37	46.0	1.00x3.85	4	CS	8	40.0	CS	N	2.00x1.50	7	2.62x1.25	2.62x2.00	abcde	Op	18 mm.	Op	1½	No	706	26	31	39½	80
HI	Cl	4.37	44.0	1.00x3.75	4	CS	8¾	48.0	CS	....	2.25x1.50	7	2.62x1.62	2.62x2.75	abcde	Op	18 mm.	Op	1½	No	875	20½	31	43 11/16	81
HI	Cl	4.37	45.0	1.00x3.85	4	CS	8¾	48.0	CS	N	2.25x1.50	7	2.62x1.62	2.62x2.75	abcde	Op	18 mm.	Op	1½	No	890	20½	31	43 11/16	82
HI	Cl	4.37	48.0	1.00x4.00	4	CS	8¾	48.0	CS	N	2.25x1.50	7	2.62x1.62	2.62x2.75	abcde	Op	18 mm.	Op	1½	No	920	20½	31	43 11/16	83
HI	Al	4.50	48.0	1.00x3.75	4	CS	8¾	48.0	CS	N	2.25x1.50	7	2.87x1.62	2.87x2.75	abcdeg	Op	18 mm.	Op	1¾	No	1125	26	38½	59½	84
HI	Cl	4.62	89.0	1.37x4.00	4	CS	10¼	83.0	CS	N	2.75x1.75	7	3.00x1.87	3.00x3.00	abcde	Op	⅞-18	Op	1¾	No	1225	26	35 7/16	46 9/16	85
HI	Al	5.25	70.0	1.37x4.25	4	CS	10¼	83.0	CS	N	2.75x1.75	7	3.00x1.87	3.00x3.00	abcde	Op	⅞-18	Op	1¾	No	1225	26	35 7/16	46 9/16	86
HI	Al	5.12	65.0	1.37x3.93	4	CS	10¼	83.0	CS	N	2.75x1.75	7	3.00x1.87	3.00x3.00	abcdeg	Op	18 mm.	Op	1¾	No	1425	27	42¾	61 1/16	87
HI	Cl	6.43	190.0	1.87x4.25	5	CS	11¾	130.0	CS	N	3.00x2.00	7	3.62x2.62	3.62x3.50	abcdeg	Op	18 mm.	Op	1¾	No	2230	26 7/16	49 1/16	58 9/16	88
HI	Cl	6.43	196.0	1.87x4.75	4	CS	11¾	130.0	CS	N	3.00x2.00	7	3.62x2.62	3.62x3.50	abcdeg	Op	18 mm.	Op	1¾	No	2250	26 7/16	49 1/16	58 9/16	89
HI	Al	6.00	89.0	1.37x4.60	4	CS	13¼	145.0	CS	N	2.75x2.50	7	3.50x2.50	3.50x3.50	abcde	Op	⅞-18	Op	2	No	1575	26	41 15/16	54 7/16	90
HI	Cl	9.18	304.0	2.00x6.00	4	CS	15⅜	314.0	CS	N	3.25x2.75	7	3.75x3.75	3.75x5.50	abcdeg	Op	18 mm.	Op	2	No	4975	32⅜	56¼	76⅝	91
HI	Cl	8.62	420.0	2.25x6.25	4	CS	18⅜	474.0	CS	N	4.00x3.75	7	4.25x4.81	4.25x5.50	abcde	Op	⅞-18	Op (2)	2½	No	7500	46½	59	92 7/16	92
HI	Cl	8.62	489.0	2.25x7.00	4	CS	18⅜	474.0	CS	N	4.00x3.75	7	4.25x4.81	4.25x5.50	abcde	Op	⅞-18	Op (2)	2½	No	7500	46½	59	92 7/16	93
HI	Cl	10.37	776.0	2.25x7.75	5	CS	18⅜	474.0	CS	N	4.00x3.75	7	4.25x4.81	4.25x5.50	abcdeg	Op	⅞-18	Op (2)	2½	No	7800	46½	63¾	92 7/16	94
HI	Als	4.40	.....	1.00x3.46	3	CS	9 15/32	.....	CS	Y	2.18x1.34	7	3.00x1.84	3.00x1.93	abcde	Op	14 mm.	Str	1¼	No	835	38⅞	29½	38½	95
Ch	Als	5.34	.....	1.25x4.18	3	CS	10½	.....	CS	Y	2.37x1.75	7	2.75x2.56	2.75x2.93	abcdeg	Op	14 mm.	Zen	1¾	No	1326	44	34½	50¾	96
HI	Cl	4.71	43.0	1.00x3.00	4	AS	9 15/32	38.4	CNS	Y	2.18x1.34	7	2.87x1.84	2.87x2.12	abcde	AC	14 mm.	Zen	1¼	No	850	.....	.....	.....	97

For abbreviations see pages 292 and 293

AMERICAN STOCK, MARINE AND

Line Number	Make and Model	Designed for	Number of Cylinders Bore and Stroke (In.)	Rated Hp. (A.M.A.)	Maximum Brake Hp. at Specified R.P.M.	Piston Displacement (Cu. In.)	Compression Ratio	Maximum Torque at R.P.M. (Lb. Ft.)	No. of Cylinders Cast In One Piece	Crankcase—Upper Half Integral with Cylinders	Valves: Arrangement	Exhaust Head Material or S.A.E. No.	Max. Head Diameter (In.) Intake	Max. Head Diameter (In.) Exhaust	Min. Port Diameter (In.) Intake	Min. Port Diameter (In.) Exhaust	Lift (In.) Intake	Lift (In.) Exhaust	Stem Diameter (In.) Intake	Stem Diameter (In.) Exhaust	Seat Angle (Degrees)
1	White ... 270	T, B, Tr	6-3 9/16x4½	30.4	83-2800	270.0	5.50	195-(t)	6	In	L	SSt	1.69	1.62	1.50	1.37	.396	.396	.375	.375	45
2	White ... 303	T, B, Tr	6-3 25/32x4½	34.3	92-2800	303.0	5.50	215-(t)	6	In	L	SSt	1.69	1.62	1.50	1.37	.396	.396	.375	.375	45
3	White ... 318	T, B, Tr	6-3⅞x4½	36.0	94-2600	318.0	5.50	234-(t)	6	In	L	SSt	1.69	1.62	1.50	1.37	.396	.396	.375	.375	45
4	White ... 396	T, B, Tr	6-4x5¼	38.4	116-2600	396.0	5.00	270-(t)	6	Se	I	CNT	2.13	2.03	1.87	1.75	.381	.381	.437	.437	45
5	White ... 434	T, B, Tr	6-4 3/16x5¼	42.0	117-2400	434.0	5.00	295-(t)	6	Se	I	CNT	2.13	2.03	1.87	1.75	.381	.381	.437	.437	45
6	White ... 460	T, B, Tr	6-4 5/16x5¼	44.6	123-2400	460.0	5.00	320-(t)	6	Se	I	CNT	2.13	2.03	1.87	1.75	.381	.381	.437	.437	45
7	White ... 580	T, B, Tr	6-4⅝x5¾	57.3	130.2300	580.0	4.60	385-(t)	6	Se	I	CNT	2.47	2.03	2.09	1.75	.437	.437	.437	.500	45
8	Wisconsin ... AC-4	Tr	4-2⅝x3¼	11.03	16-2600	70.4	4.60	39.2-1600	4	Se	I	Sil	1.12	1.12	.937	.937	.232	.232	.310	.310	45
9	Wisconsin ... SU	T, Ind	4-4x5	25.6	38-1600	251.0	4.20	160-1000	4	In	I	Sil	1.68	1.68	1.53	1.53	.438	.379	.375	.375	45
10	Wisconsin ... W	T, Tr, Ind	4-4⅛x5	27.2	42-1600	267.0	4.15	182-950	4	In	I	Sil	1.68	1.68	1.53	1.53	.438	.379	.375	.375	45
11	Wisconsin ... X	T, Tr, Ind	4-4½x5	32.4	66-1900	318.0	4.25	224-1000	4	In	I	Sil	2.00	2.00	1.81	1.81	.384	.393	.437	.437	45
12	Wisconsin ... N	T, Tr	6-3⅜x4½	29.4	55-2600	245.0	4.50	163-650	6	In	I	Sil	1.65	1.65	1.50	1.50	.382	.382	.375	.375	45
13	Wisconsin ... GA-1	T, Tr, Ind	6-3⅝x5	31.5	44-1600	309.0	4.85	196-675	6	In	I	Sil	1.71	1.71	1.50	1.50	.379	.379	.375	.375	45
14	Wisconsin ... GA-2	T, Tr, Ind	6-3¾x5	33.7	49-1600	331.0	4.50	211-700	6	In	I	Sil	1.71	1.71	1.50	1.50	.379	.379	.375	.375	45
15	Wisconsin ... L-2	T, Tr, Ind	6-3⅞x5	36.0	62-1800	354.0	4.27	236-700	6	In	I	Sil	2.00	2.00	1.75	1.75	.379	.379	.434	.434	45
16	Wisconsin ... L-3	T, Tr, Ind	6-4⅛x5	40.8	68-1800	401.0	4.30	260-700	6	In	I	Sil	2.00	2.00	1.75	1.75	.379	.379	.434	.434	45
17	Wisconsin ... L-4	T, Ind	6-4¼x5	43.3	71-1800	426.0	4.26	280-650	6	In	I	Sil	2.00	2.00	1.75	1.75	.379	.379	.439	.439	45
18	Wisconsin ... ZA-1	Tr, Ind	6-4½x5	48.6	78-1600	477.0	4.50	322-800	6	Se	I	Sil	2.25	2.25	2.06	2.06	.450	.450	.437	.437	45
19	Wisconsin ... ZA-2	Tr, Ind	6-4⅝x5	51.3	82-1600	504.0	4.88	340-750	6	Se	I	Sil	2.25	2.25	2.06	2.06	.450	.450	.437	.437	45

ABBREVIATIONS

*—Others also
†—Provided with flame arrester
‡—Two used per cylinder
‡‡—Four used per cylinder
*—With transmission
**—Three used per cylinder
§—Weight complete φ—Per pair
(1)—Sleeves used in cylinders
(2)—Two used (3)—Three used
(4)—Four used
(5)—Wet sleeves used in cylinders
(6)—Also built in 1, 2, and 3 cylinder models
(7)—Also built in 2, 3, and 6 cylinder models
(8)—Also built in 4 and 6 cylinder models
a—Main Bearings
(aa)—800-1600 RPM
AC—AC Spark Plug **Al**—Aluminum
Ala—Aluminum, anodized
Als—Aluminum with Strut
AS—Alloy Steel **Au**—Autolite
AUS—Austenitic Steel
b—Connecting Rod Bearings
(bb)—1000-1800 RPM
B—Buses **Be**—Bevel Gear
BM—Bi Metal Alloy Steel
Bos—Bosch
B-Ti—Ball or Timken Roller Bearings
c—Camshaft Bearings
(cc)—800-1400 RPM **C**—Cars
CA—Champion or AC Spark Plugs
CAl—Chrome Aluminum
Car—Carter **CAS**—Cast Alloy Stee
CG—Chandler-Groves **Ch**—Chain
CH—Champion Spark Plug
CHS—Chrome Silicon
CI—Cast Iron
CM—Chrome Molybdenum
CMS—Carbon Manganese Steel
CNA—Chrome Nickel Alloy
CNI—Chrome Nickel Iron
CNM—Chrome Nickel Molybdenum Steel
CNS—Chrome Nickel Steel
CNT—Chrome Nickel Tungsten
CS—Carbon Steel
CT—Cast Iron, Tin Plated
CV—Chrome Vanadium
d—Wrist Pins (dd)—800-1200 RPM
D—Distillate **DC**—Diachrome
Di—Diesel Fuel **Dur**—Duralumin
e—Timing gears or Chain
(ee)—900-1100 RPM
En—Ensign Carburetor

AMERICAN TWO CYCLE OUTBOARD MOTORS

Make and Model	Power Head	No. of Cylinders	Bore and Stroke (In.)	Piston Displacement (Cu. In.)	N.O.A. Certified Brake Hp.	R.P.M.	Weight (Lb.)	Piston Rings No. and Size	Propeller Diameter and Pitch (In.)	Starting Device	Fuel Tank Capacity (Gal.)	Gear Ratio	Ignition System Type	Carburetor Make and Size	Spark Plug Make and Model	Type of Exhaust	Cooling System
Champion ... S1D	RV-2 Port	1	2⅛x1¾	6.23	2.9*	3500	31	2-⅛	7¼x6¼	Cord	.50	13-21	Magneto	Til-¾	Ch-J115	Muffler	Pump
Champion ... D1D	RV-2 Port	1	2⅛x1¾	6.23	3.2*	3500	33	3-3/32	7x6	Cord	.69	13-21	Magneto	Til-¾	Ch-J115	Muffler	Pump
Champion ... S2D	RV-2 Port	2	2⅛x1¾	9.78	3.4*	3200	37	2-⅛	7¼x6¼	Cord	.87	13-21	Magneto	Til-¾	Ch-J115	Muffler	Pump
Champion ... D2D	RV-2 Port	2	2⅛x1¾	9.78	4.4*	3100	38	3-3/32	8¼x6	Cord	1.12	13-21	Magneto	Til-¾	Ch-J115	Muffler	Pump
Champion ... D3D	RV-2 Port	2	2⅛x1¾	12.46	6.6*	4000	49	3-3/32	9x6	Cord	1.12	13-21	Magneto	Til-13/16	Ch-J115	Muffler	Pump, Syphon
Eclipse [1] ... SMD	RV-1 Port	1	2 1/16x1½	5.01	2.2	3300	27	3-3/32	7½x5	Cord	.62	12-19	Magneto	Str-†	Ch-H10	Underwater	Air
Eclipse [1] ... EL	Electric M	otor	using a 6	or 12 v	olt ba	ttery	for po	wer.	8x8	Electric	...	...	...	...	...	...	...
Eclipse [1] ... TMD	RV-1 Port	2	2 1/16x1½	10.02	4.2	4000	41	3-3/32	8¼x6	Cord	.62	12-19	Magneto	Str	Ch-J10	Underwater	Air
Eclipse [1] ... SM	RV-1 Port	1	2 1/16x1½	5.01	2.2	3300	27	3-3/32	7½x5	Cord	.62	12-19	Magneto	Str-FL	Ch-H10	Underwater	Air
Elto [2] ... Pal	CL-2 Port	1	1⅜x1⅜	2.00	0.9	3500	14	2-3/32	6x5	Cord	.20	13-20	Magneto	Own	Ch-J8	Underwater	Pump
Elto [2] ... Ace	CL-2 Port	1	1¾x1 35/64	3.75	1.8	3500	22½	2-3/32	7x6	Cord	.43	13-20	Magneto	Own	Ch-C7	Underwater	Pump
Elto [2] ... Handitwin	CL-2 Port	2	1¾x1⅜	6.60	2.8	3500	29½	2-3/32	7½x6	Cord	.43	13-20	Magneto	Own	Ch-C7	Underwater	Pump
Elto [2] ... Speeditwin	RV-2 Port	2	2¾x2½	30.00	22.5	4000	105	2-⅛	10½x10½	Cord	2.50	15-21	Magneto	Own	Ch-M5	Underwater	Pump
Evinrude ... Ranger	CL-2 Port	1	1⅜x1⅜	2.00	1.1	3750	16	2-3/32	6x5	Cord	.50	13-20	Magneto	Own	Ch-J8	Underwater	Pump
Evinrude ... Sportsman	CL-2 Port	1	1¾x1 35/64	3.75	2.0	3500	25	2-3/32	7x6	Cord	.50	13-20	Magneto	Own	Ch-C7	Underwater	Pump
Evinrude ... Sportwin	CL-2 Port	2	1¾x1⅜	6.60	3.0	3500	35	2-3/32	7½x6	Cord	.75	13-20	Magneto	Own	Ch-C7	Underwater	Pump
Evinrude ... Fisherman	CL-2 Port	2	2x1⅝	10.00	4.7	3750	48	2-⅛	7½x8	Cord	.75	13-20	Magneto	Own	Ch-M6	Underwater	Pump
Evinrude ... Weedless Fish'n	CL-2 Port	2	2x1⅝	10.00	4.7	3750	49½	2-⅛	7½x8	Cord	.75	13-20	Magneto	Own	Ch-M6	Underwater	Pump
Evinrude ... Lightwin	CL-2 Port	2	2x1⅝	10.00	4.7	3750	46	2-⅛	7½x8	Cord	.75	11-17	Magneto	Own	Ch-M6	Underwater	Pump
Evinrude ... Lightfour	RV-2 Port	4	1¾x1 35/64	15.00	9.2	4000	59	3-3/32	8¾x9	Cord	1.25	11-17	Magneto	Own	Ch-M5	Underwater	Pump
Evinrude ... Sportfour	RV-2 Port	4	2x2	25.00	16.2	4000	90	3-⅛	9¾x9¾	Cord	2.00	13-19	Magneto	Own	Ch-M5	Underwater	Pump
Erinrude ... Speedifour	RV-2 Port	4	2½x2½	50.00	33.4	4000	135	2-⅛	10½x13	Cord	4.00	15-21	Magneto	Own	Ch-M5	Underwater	Pump
Erinrude ... Midget Racer	RV-2 Port	2	1¾x1 35/64	7.50	...	...	37½	3-3/32	6¾x8½	Cord	1.25	13-20	Magneto	Own	Ch-R1	Muffler	Pump
Evinrude ... Racing Speeditwin	RV-2 Port	2	2¾x2½	30.00	...	...	97	2-⅛	9½x14	Cord	2.50	13-19	Battery	Vac	Ch-R11S	Muffler	Pump
Evinrude ... Racing 460	RV-2 Port	4	2¾x2½	60.00	...	...	140	2-⅛	10½x18	Cord	4.00	13-19	Battery	Vac	Ch-R11S	Muffler	Pump
Johnson ... MS-38	NV-4 Port	1	1⅜x1⅜	2.04	1.1	4000	17	2-3/32	6½x3¼	Cord	.18	13-20	Magneto	Own-½	Ch-J8	Underwater	Pump
Johnson ... MD-38	NV-4 Port	1	1⅜x1⅜	2.04	1.1	4000	22	2-3/32	6½x3¼	RP	.27	13-20	Magneto	Own-½	Ch-J8	Underwater	Pump
Johnson ... LS-38	CV-4 Port	1	1⅞x1½	4.14	2.3	4000	33	2-⅛	8x4¾	Cord	.33	14-25	Magneto	Own-13/16	Ch-J8	Underwater	Pump
Johnson ... DS-38	CV-4 Port	1	1⅞x1½	4.14	2.3	4000	39	2-⅛	8x4¾	RP	.50	14-25	Magneto	Own-13/16	Ch-J8	Underwater	Pump
Johnson ... LT-38	CV-4 Port	2	1⅞x1½	8.28	4.5	4000	40	2-⅛	8x7½	Cord	.63	14-25	Magneto	Own-13/16	Ch-J8	Underwater	Pump
Johnson ... DT-38	CV-4 Port	2	1⅞x1½	8.28	4.5	4000	45	2-⅛	8x7½	RP	.75	14-25	Magneto	Own-13/16	Ch-J8	Underwater	Pump
Johnson ... 210	NV-3 Port	2	2x1½	9.40	3.5	3000	38¾	3-⅛	7⅝x5½	Cord	.87	13-19	Magneto	Own-¾	Ch-C7	Underwater	Pre Vac
Johnson ... KA-38	RV-2 Port	2	2⅛x1 31/32	13.90	9.3	4000	64	3-⅛	9½x9	Cord	1.62	14-24	Magneto	Own-1	Ch-R7	Underwater	Pre Vac
Johnson ... PO-37	RV-2 Port	2	2¾x2.52	29.90	22.0	4000	109	2-⅛	12x13	Cord	2.50	12-21	Magneto	Vac-2	Ch-R7	Underwater	Pre Vac
Thor [3] ... Single Cylinder	NV-2 Port	1	2 3/16x1⅝	6.10	2.4	2500	37	2-⅛	6½x.....	Cord	.50	13-20	Magneto	Own	Own	Underwater	Pump
Thor [3] ... Twin	NV-2 Port	2	2 3/16x1⅝	12.20	4.8	2800	47	2-⅛	9x.....	Cord	.75	13-20	Magneto	Own	Own	Underwater	Pump
Thor [3] ... Three Cylinder	NV-3 Port	3	2x1½	14.14	...	...	...	2-⅛	9x.....	Cord	.75	13-20	Magneto	...	Own	Underwater	Pump
Thor [3] ... Twin	NV-3 Port	3	2x1½	9.42	...	...	...	2-⅛	...	Cord	.75	13-20	Magneto	...	Own	Underwater	Pump

ABBREVIATIONS:

*—SAE Rating
†—Flat Bowl
[1]—Bendix Products Corp.
[2]—Evinrude Motors
[3]—Cedarburg Mfg. Co.
Ch—Champion Spark Plug Co.
CL—Clock Valve
CV—Combination Rotary Valve and Valveless
FL—Fuel Lift
NV—Valveless
Pre Vac—Pressure Vacuum
RP—Ready Pull
RV—Rotary Valve
Str—Stromberg Carburetor Div.
Til—Tillotson
Vac—Vacturi

COMMERCIAL VEHICLE ENGINES—*Concluded*

Front End Type	PISTONS Material	PISTONS Length (In.)	PISTONS Weight (with Pins, Rings and Bushing)—(Oz.)	PISTONS Piston Pin—Diameter and Length (In.)	Number of Rings per Piston	CONNECTING RODS Material	CONNECTING RODS Center to Center Length (In.)	CONNECTING RODS Weight—With Bushing and Caps (Oz.)	CRANKSHAFT Material	CRANKSHAFT Counterbalances Used	CRANKSHAFT Crank-pin Diameter and Length (In.)	CRANKSHAFT Main Bearings Number	Main Bearings Diameter and Length (In.) Front	Main Bearings Diameter and Length (In.) Rear	Oil Pressure To	SPARK PLUG Recommended Make	SPARK PLUG Thread Size	CARBURETOR Make	CARBURETOR Size	Adapted for Use of Kerosene or Distillate	Weight (Without Carburetor or Ignition)—(Lb.)	OVERALL DIMENSIONS (In.) Width	OVERALL DIMENSIONS (In.) Height	OVERALL DIMENSIONS (In.) Length	Line Number
HI	CI	4.71	48.0	1.12x3.12	4	AS	9 5/32	38.6	CNS	Y	2.18x1.34	7	2.87x1.84	2.87x2.12	abcde	AC	14 mm.	Zen	1⅜	NO	852	.....	.....	.....	1
HI	CI	4.71	53.1	1.12x3.12	4	AS	9 5/32	38.6	CNS	Y	2.18x1.34	7	2.87x1.84	2.87x2.12	abcde	AC	14 mm.	Zen	1⅜	NO	980	.....	.....	.....	2
HI	CI	4.71	56.1	1.12x3.12	4	AS	9 5/32	38.6	CNS	Y	2.18x1.34	7	2.87x1.84	2.87x2.12	abcde	AC	14 mm.	Zen	1⅜	NO	1030	.....	.....	.....	3
Ch	Al	5.60	62.4	1.18x3.43	4	AS	10½	68.8	CNS	Y	2.37x1.75	7	2.75x2.50	2.75x2.87	abcdefg	AC	14 mm.	Zen	1¾	NO	1320	.....	.....	.....	4
Ch	Al	5.43	44.0	1.18x3.43	4	AS	10½	68.8	CNS	Y	2.37x1.75	7	2.75x2.50	2.75x2.87	abcdefg	AC	14 mm.	Zen	1¾	NO	1320	.....	.....	.....	5
Ch	Al	5.46	65.6	1.18x3.43	4	AS	10½	68.8	CNS	Y	2.37x1.75	7	2.75x2.50	2.75x2.87	abcdefg	AC	14 mm.	Zen	1¾	NO	1331	.....	.....	.....	6
Ch	Al	5.50	63.0	1.25x4.06	4	AS	12⅛	86.7	CNS	Y	2.62x2.12	7	3.00x3.12	3.00x3.96	abcdefg	AC	18 mm.	Zen	2	.....	1925	.....	.....	.....	7
HI	Al	3.00	11.0	.875x2.17	3	CS	8⅜	21.0	CS	Y	1.75x1.12	2	Ti420-4'4	Ti 420-414	abcdeg	CH	18 mm.	Str	¾	D	230	17	26 9/16	28 13/16	8
HI	CI	4.25	49.7	1.06x3.47	3	CS	10½	64.0	CS	N	2.00x2.00	3	1.93x2.50	2.06x3.00	abcdeg	CH	⅞-18	Str	1¼	NO	615	25¾	34¾	35¼	9
HI	CI	4.15	50.2	1.06x3.47	3	CS	10½	65.0	CS	N	2.37x2.00	3	2.37x2.50	2.37x3.00	abcdeg	CH	⅞-18	Str	1¼	NO	640	25¾	34¾	35¼	10
HI	CI	4.75	117.7	1.18x3.93	5	CS	10½	118.7	CS	N	2.75x2.50	3	2.75x3.00	2.75x3.00	abcdeg	CH	⅞-18	Str	1½	NO	850	25¾	36⅜	47 1/16	11
HI	CI	4.00	43.7	1.06x2.84	3	CS	9	54.0	CS	N	2.25x1.75	4	2.25x2.50	2.25x3.00	abeg	CH	⅞-18	Str	1¼	NO	820	25¾	32⅜	45 15/16	12
HI	CI	4.00	48.0	1.06x3.09	3	CS	10½	68.0	CS	N	2.50x1.75	4	2.50x2.50	2.50x3.00	abdeg	CH	⅞-18	Str	1½	NO	965	25¾	36¼	45 15/16	13
HI	CI	3.90	53.0	1.06x3.09	3	CS	10½	68.0	CS	N	2.50x1.75	4	2.50x2.50	2.50x3.00	abdeg	CH	⅞-18	Str	1½	NO	975	25¾	36¼	45 15/16	14
HI	CI	4.87	66.0	1.25x3.14	3	CS	10½	75.0	CS	N	2.62x1.75	4	2.75x2.25	2.75x2.75	abdeg	CH	⅞-18	Str	1½	NO	1075	25¾	37 3/16	53⅝	15
HI	CI	4.71	71.0	1.25x3.39	4	CS	10½	75.0	CS	N	2.62x1.75	4	2.75x2.25	2.75x2.75	abdeg	CH	⅞-18	Str	1½	NO	1095	25¾	37 5/16	53⅝	16
HI	CI	4.62	80.7	1.25x3.39	4	CS	10½	75.0	CS	N	2.62x1.75	4	2.75x2.25	2.75x2.75	abdeg	CH	⅞-18	Str	1½	NO	1110	25¾	37 5/16	53⅝	17
HI	CI	4.75	55.7	1.18x3.93	4	CS	10½	118.7	CS	N	2.75x2.50	4	2.75x3.00	2.75x3.00	abcdeg	CH	⅞-18	Str	1¾	NO	1260	25¾	37⅞	60 5/16	18
HI	CI	4.68	119.7	1.18x3.93	4	CS	10½	118.7	CS	N	2.75x2.50	4	2.75x3.00	2.75x3.00	abcdeg	CH	⅞-18	Str	1¾	NO	1270	25¾	37⅛	60 5/16	19

Ext—Extruded Steel
f—Accessories Drive
(ff)—Forked 67.0 oz., Plain 40.0 oz.
F—In Head and Side ("F" Head)
FA—Fire Apparatus
FP—Fuel Injection Pump
g—Rocker Arm Bearings
(gg)—Forked 80.0 oz., Plain 50.0 oz.
(h)—Intake 30°, Exhaust 45°
(hh)—Forked 163.0 oz., Plain 55.0 oz.
HB—Horizontal in Block
HC—Helical Gear and Chain
HH—Horizontal in Head
HI—Helical Gear **Hol**—Holley

I—In Head (Valves) **In**—Integral
Ind—Industrial
(k)—850-1550 RPM **K**—Kerosene
K-D—Kerosene and Distillate
L—Valves at Side (L-Head)
Lyn—Lynite
m—Reverse Gear
M—Marine (Engine Type)
May—Mayer Carburetor
ML—McCord Lubricator
N—No or None
NS—Nickel Steel
Op—Optional
Pu—Power Units

RC—Rail Cars
SB—Spiral Bevel
Sbe—Spur and Bevel
SCA—Special Copper Alloy
Schebler
SCN—Silicon Chrome Nickel Steel
Se—Separate
SF—Steel Forging
Sho—Shore Carburetor
Sil—Silchrome Steel
Sp—Spur Gear
SP—Splitdorf
Spec—Special **SS**—Semi Steel
SSt—Silchrome or Stellite

St—Stationary **Ste**—Stellite
Str—Stromberg Carburetor
SZ—Schebler and Zenith
T—"T" Head (valves opposite)
T—Trucks
(t)—1000 to 1200 RPM
Ta—Taxicabs
Tim—Timken **Tr**—Tractors
Tun—Tungsten
TZ—Tillotson or Zenith
Win—Winfield
(x)—Ball Bearings
Y—Yes **Zen**—Zenith
ZS—Zenith or Stromberg

American Truck Exports—1937*

COUNTRIES	Under 1 Ton No.	Under 1 Ton Dollars	1 Ton and not over 1½ Tons No.	1 Ton and not over 1½ Tons Dollars	Over 1½ Tons and not over 2½ Tons No.	Over 1½ Tons and not over 2½ Tons Dollars	Over 2½ Tons No.	Over 2½ Tons Dollars	Bus Chassis No.	Bus Chassis Dollars	Total 1937 Trucks, Buses and Chassis No.	Total 1937 Trucks, Buses and Chassis Dollars	Total 1936 Trucks and Buses No.	Total 1936 Trucks and Buses Dollars
Europe	3,806	$1,221,082	27,410	$13,483,316	9,557	$7,983,940	4,176	$7,158,128	1,032	$747,036	45,981	$30,593,502	22,458	$10,734,379
North America	2,862	1,455,339	8,800	5,342,609	2,708	2,570,495	1,391	3,415,538	104	135,372	15,865	12,919,353	12,051	8,589,179
South America	3,679	1,511,391	24,513	13,323,493	3,206	2,484,198	916	1,557,793	143	163,490	32,457	19,040,365	20,521	11,146,912
Asia	2,553	1,002,059	29,346	12,831,821	3,772	2,774,245	1,762	3,194,841	24	26,556	37,457	19,829,522	23,407	11,044,640
Oceania	2,332	853,682	5,231	2,474,266	1,617	1,140,183	146	224,290	23	25,870	9,349	4,718,291	10,381	4,777,203
Africa	5,459	2,279,365	14,157	6,966,236	3,960	2,625,127	839	999,532	186	134,179	24,601	13,004,439	17,046	8,609,323
TOTAL	20,691	$8,322,918	109,457	$54,421,741	24,820	$19,578,188	9,230	$16,550,122	1,512	$1,232,503	165,710	$100,105,472	105,864	$54,901,636
Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	350	315,150	236	210,465
Hawaii	653	354,849	759	495,651	153	159,503	218	590,441	5	.....	1,788	1,607,772	885	783,078
Puerto Rico	178	93,079	770	496,881	166	127,072	50	102,696	2	7,328	1,166	821,368	1,182	870,534
Virgin Islands	9	4,954	30	16,730	21	16,638	2	1,855	.....	1,640	62	40,177	.....	.....
GRAND TOTAL	21,531	$8,775,800	111,016	$55,431,003	25,160	$19,881,401	9,500	$17,245,114	1,519	$1,241,471	169,076	$102,889,939	108,167	$56,765,713

U. S. Exports of Parts and Accessories—1937*

COUNTRIES	Auto Parts for Assembly	Auto Pistons	Auto Piston Rings	Auto Differential and Transmission Gears	Spark Plugs	Auto and Truck Springs	Asbestos Brake Lining: Molded and Semi-Molded	Asbestos Brake Lining: Not Molded	Auto Parts for Replacement N. E. S.	Auto Accessories N. E. S.	Total Exports of Parts and Accessories
Europe	$11,892,526	$94,007	$178,578	$221,684	$952,367	$50,143	$141,487	$36,902	$11,674,233	$653,136	$28,006,145
North America	28,931,734	121,309	244,933	84,386	165,762	131,511	201,282	124,597	5,954,083	3,071,544	43,561,105
South America	7,776,448	55,318	111,363	61,611	213,012	110,157	209,196	58,538	7,712,354	341,714	19,227,781
Asia	3,938,528	22,561	57,964	90,145	276,086	241,254	88,818	13,066	6,363,583	299,756	12,641,000
Oceania	437,906	6,053	1,400	8,293	21,363	4,381	31,396	14,703	1,846,008	185,333	2,585,788
Africa	444,580	34,213	26,546	18,827	76,298	202,983	49,896	3,149	4,726,382	310,295	5,949,018
TOTAL	$53,421,722	$333,461	$620,784	$484,946	$1,704,888	$740,429	$722,075	$250,955	$38,276,643	$4,861,778	$111,970,837
Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	162,168
Hawaii	35,808	4,208	9,346	5,755	33,913	32,877	31,543	8,814	661,634	70,470	916,386
Puerto Rico	3,912	665	2,209	589	7,940	30,428	15,381	5,354	340,531	7,568	423,949
Virgin Islands	270	.....	17	.....	254	157	207	.....	9,530	1,754	12,262
GRAND TOTAL	$53,461,712	$338,334	$632,356	$491,290	$1,746,995	$803,891	$769,206	$265,123	$39,288,338	$4,941,570	$113,485,602

* Automotive Division—Bureau of Foreign and Domestic Commerce.

For additional export data see page 261

AMERICAN TRACTORS—WHEEL TYPE

Make and Model	Overall Dimensions (In.): Wheelbase (In.)	Length	Width	Height	Net Weight (Lb.)	Minimum Turning Radius (Ft.)	Ground Clearance (In.)	Hp. Rating: Belt	Drawbar	Power Take-Off	No. of Forward Speeds	Plowing Speed—M.P.H.: First	Second	Third	Fourth	Reverse	Wheels: Steel Diam. and Face: Front (In.)	Rear (In.)	Tire Size: Front (In.)	Rear (In.)	Engine: No. of Cylinders Bore and Stroke (In.)	Valve Arrangement	R.P.M. at Normal Operating Speeds	Maximum Brake Hp. at Specified R.P.M.	Maximum Torque (Lb. Ft.) at Specified R.P.M.	Cu. In. Displacement	Fuel Recommended	Ignition Make	Carburetor Make	Oiling System Type	Clutch Make and Type	Type Drive to Traction Members	No. of Drive Wheels	Belt Pulley: Diameter (In.)	Face (In.)	Normal R.P.M.	Steering Type
Allis-Chalmers WC	87	136	75⅞	63	(a)	8	26	23	2	Y	4	2½	3½	4¾	9	2	24x4	40x6	5.50/16	11.75/24	4-4x4	I	1300	25-1300	120-800	202	GKD	FM	Zen	DC	Roc-SP	SG	2	9	6½	1170	WG
Allis-Chalmers WF	70	111	50	59	(b)	12	9½	23	2	N	4	2½	3½	4¾	9	2	24x4	40x6	5.50/16	11.25/24	4-4x4	I	1300	25-1300	120-800	202	GKD	FM	Zen	DC	Roc-SP	SG	2	9	6½	1170	FK
Allis-Chalmers U	76½	122	67	65	(c)	8	11	33	3	Y	4	2½	3¼	4½	10¾	2⅞	28x6	45x11	6.00/16	11.25/28	4-4½x5	I	1200	37-1200	188-800	317	GKD	FM	Zen	DC	Roc-SP	SG	2	10	7½	1095	FK
Allis-Chalmers UC	87¼	125	84¾	67⅝	(d)	8	30	33	3	Y	4	2½	3⅓	4¾	11	3	24x5	45x11	6.00/16	11.25/28	4-4½x5	I	1200	37-1200	188-800	317	GKD	FM	Zen	DC	Roc-SP	SG	2	10	7½	1095	WG
Allis-Chalmers A	90⅝	140	63	66	7200	8	11	39.5	4	Y	4	2⅝	3½	4½	9½	3			7.50/18	12.75/28	4-4¾x6½	I	1050	44.5-1050	250-700	460.7	GKD	FM	Zen	DC	Roc-SO	SG		13	8½	948	FK
Beeman Hy-Wheel		106	38	65	700		16½	4	2½			¾	2½				34x4				1-3½x4½	L					G		Kin		-Co			4½	3¾		
Beeman Jr		71½	27½	39	360	2¼	14	1	½			¾	2½				30x3				1-2½x2½						G				Own-SP						
Beeman		86	17¼	40	550			4	2			¾	3½				25x3¼				1-3½x4½	L					G		Kin	CS	-Co			4½	3¾	1500	
Case L	79	132	67	57		13				Y	3	2⅓	3¼	4			30x6	48x12	7.50/16	12.75/28	4-4⅝x6	I	1100			403.2	GKD		Zen	DC	TD-SO	Cha	2	13	8½	780	FK
Case C	66	114	60	48		10				Y	3	2⅓	3⅓	4½			28x5	30x6	6.00/16	11.25/24	4-3⅞x5½	I	1100			259.5	GKD		Zen	DC	TD-SO	Cha	2	10¼	6½	973	FK
Case CC	89	124⅛	Var	53						Y	3	2⅓	3⅓	4½			25x4	48xVar	5.00/16	9.00/36	4-3⅞x5½	I	1100			259.5	GKD		Zen	DC	TD-SO	Cha	2	11¾	6¼	846	FK
Case RC	78	121	Var	62						Y	3	2⅓	3⅓	4½			25x6	48x2½	7.50/10	8.25/36	4-3¼x4	L	1425			133.0	G		Zen	DC	TD-SO	Cha	2	10⅛	6¼	991	FK
CO-OP 1	84	124	75¾	55	3380	8	13½	NR	NR	Opt	4	2.62	4.85	6.50	17.2	2.25			7.50/16	10.00/28	4-3¼x4	L	1500	25-1500	90-1500	133.0	G	Au	Zen	DC	B&B-SP	Sbe	2	16	7	620	FK
CO-OP 2	85	124¾	72	57½	4230	13	15	29.4	22.7	Opt	5	2.59	4.48	6.45	13.27[1]	3.22			6.00/16	11.25/28	6-3⅛x4⅜	L	1500	38-1500	134-1500	201.0	G	Au	Zen	DC	B&B-SP	Sbe	2	14	8¾	710	FK
CO-OP 3	92	132¼	76½	63	4700	14	15	37	28.9	Opt	5	2.89	4.99	7.14	14.95[2]	3.57			7.50/16	12.75/28	6-3⅜x4½	L	1600	46-1600	150-1600	242.0	G	Au	Zen	DC	B&B-SP	Sbe	2	14	8¾	710	FK
Eagle 6A	80	130	70	60	4800	15	12	37	22	Y	3	2.5	3.3	4.5		2.5	30x6	48x12	7.50/18	12.75/28	6-4x4¾	L	1400	56-1400	225-850	358.0	G	ES	Zen	DC	TD-DP	SG	2	16	8½	625	FK
Eagle 6B	82	130	80	60	3200	7¾	28			Y	4	1.8	3½	5	13	2	24x4	40x10	5.50/16	11.25/24	6-3¼x4⅛	L	1575	40-1575	135-1000	205.0	G	ES	Zen	DC	Long-DP	SG	2	8½	7	1180	SA
Eagle 6C	78	124	60	55	3250	13	15			Y	4	1.8	3½	5	13	2	26x6	40x10	6.00/16	11.25/24	6-3¼x4⅛	L	1575	40-1575	135-1000	205.0	G	ES	Zen	DC	Long-DP	SG	2	8½	7	1180	FK
Fordson Row Crop	88	126	83	54	3262	9¼	16	20		Y	3	1.92	2.91	5.13		1.65	24x4	50x2	5.50/16	9.00/36	4-4⅛x5	L		30-1100	160-800	267.0	GKD	Bos	ZK	CS	Own-Mo	WG	2	9½	6½	1100	SA
Fordson Industrial	63	95	66	51	3570	10¾	8	20		Y	3	2.39	3.33	10.59		3.19			23x5	36x6	4-4⅛x5	L	1100	30-1100	160-800	267.0	G	Bos	Zen	CS	Own-Mo	WG	2	9½	6½	1100	FK
Fordson Land Utility	63	98	65	56	3448	10¾	10	20	11	Y	3	2.25	3.18	7.96					6.00/19	11.25/24	4-4⅛x5	L	1100	30-1100	160-800	267.0	GKD	Bos	ZK	CS	Own-Mo	WG	2	9½	6½	1100	FK
Fordson Agricultural	63	98	65	57	3020	10¾	9	20	11	Y	3	2.20°	3.09°	7.75°		2.96°	30x6	42x9			4-4⅛x5	L	1100	30-1100	160-800	267.0	GKD	Bos	ZK	CS	Own-Mo	WG	2	9½	6½	1100	FK
Graham-Brad. Row Crop	91	132¼	73¾	69	3500	8	23½	30	22	Y	4	2.77	4.41	5.66	20	2.04			5.50/16	9.00/36	6-3¼x4⅜	L	1500	36-1500	145-1000	217.0	G	Del	MS	DC	Long-SP	SG	2	15	7¼	714	SA
Graham-Brad. Standard	90	128⅛	73¾	62½	3800	14	19	30	22	Y	4	2.27	3.69	4.67	16.33	1.65			6.00/16	11.25/24	6-3¼x4⅜	L	1500	36-1500	145-1000	217.0	G	Del	MS	DC	Long-SP	SG	2	15	7¼	714	FK
Huber L	80⅝	123	59	57	4000	12⅔	15			Y	3	2.4	3.5	4.5		1.8	28x5	42x10	6.00/16	11.25/24	4-4½x5¼	I	1200	46-1200	210-1200	331.0	GKD	Bos	Zen	DC	TD-SP	SG	2	14	7⅜	705	FK
Huber Super 4	95	160	88	62	9500	14	11½	62	40	Y	2	2.25	3.25			1.75	34x6	56x20	7.50/18	12.75/28	4-5½x6½	I	1000	69-1000	390-825	618.0	GKD	Bos	Zen	DC	TD-DP	SG	2	15	9⅜	666	FK
Huber B	84½	127½	72½	55	3100	9	26½			Y	4	2.2	3.2	4.3	8.6	1.8	25x4½	50x8	5.50/16	9.00/36	4-3 13/16x4½	L	1300	33-1300	132-1300	205.0	GD	Bos	Zen	DC	Roc-SP	IG	2	10	7	990	SA
Huber HK	83¾	137½	73	61	6000	15	12½			Y	3	2.3	3.08	5.5		1.83	34x6	50x12	7.50/18	12.75/28	4-5⅛x6¼	I	1150	65-1150	320-900	516.0	GKD	Bos	Zen	DC	TD-SP	SG	2	17	8½	616	FK
Huber Le	85½	130	82½	57	3900	9¼	30			Y	3	2.4	3.5	4.5		1.8	25x4½	42x10	6.00/16	11.25/24	4-4½x5¼	I	1200	46-1200	210-1200	331.0	GKD	Bos	Zen	DC	TD-SP	SG	2	14	7⅜	705	SA
I.H.C.-Farmall[3] F-12	77	124	74¼	64¾	2824	7		14.6	9.7	Y	3	2.25	3	3.87		2.25	22½x4	54x6	5.00/15	9.00/40	4-3x4	I	1400		74-900	113.1	GD	Own	Own	DC	Roc-SP	SG	2	12⅜	6¼	800	SA
I.H.C.-Farmall[3] F-20	85	140½	80½	70	3950	8		23.8	15.9	Y	4	2.37	2.75	3.25	3.75	2.87	25x4	40x6	6.00/16	9.00/36	4-3¾x5	I	1200			220.9	GD	Own	Zen	CS	Own-SP	SG	2	15¼	6½	654	SA
I.H.C.-Farmall[3] F-30	94	147	89¼	70½	5300	8⅔		30.2	20.2	Y	4	2.00	2.62	3.25	3.87	2.50	25x4	42x12	6.00/16	10.00/36	4-4¼x5	I	1150			283.7	GKD			CS	Own-SP	SG	2	14⅝	7½	682	SA
I.H.C.-Internat.[3] I-12	60	99	50	51	3200	8½	10			Y	3	3.50	6.00	10.37		3.50			6.00/9	9.00/24	4-3x4	I	2000	22-2000	74-900	113.1	G	Own	Own	DC	Roc-SP	SG	2	13¼*	6¼*		FK
I.H.C.-Internat.[3] 20	78	123	83½	62	6780	14½	9⅝			Y*	4	2.25	4.00	7.00	10.00	3.00			5.50/20	40x8	4-4¼x5	I	1000	33-1000	181-750	283.7	G	Own	Zen	CS	Own-SP	SG	2	15¼*	7*	645	FK
I.H.C.-Internat.[3] I-30	78	121	85	62	7550	15				Y*	4	2.50	4.00	7.25	12.25	3.00			5.50/20	40x8	4-4¼x5	I	1150	39-1150	197-800	283.7	G	Own	Zen	CS	Own-SP	SG	2	15¼*	7*	719	FK
I.H.C.-Internat.[3] I-40	85	139	96	70	9550	17				Y*	4	1.87	3.50	6.62	10.62	2.87			7.50/20	11.25/28	6-3¾x4½	I	1750	55-1750	195-800	298.2	G	Own	Zen	DC	Own-SP	SG	2	16¾*	9*	645	FK
I.H.C.-Internat.[3] ID-40	85	139	96	70	10550	17				Y*	4	2.00	3.75	6.75	9.87	3.00			7.50/20	11.25/28	4-4¾x6½	I	1100	52-1100	275-600	460.8	O			DC	Own-SP	SG	2	16¾*	9*	590	FK
I.H.C.-McC.-D.[3] W-12	60	103	50	51	2900	9	11¼	16.07	10.46	Y	3	2.12	2.75	3.62		2.12	22½x3½	42x8			4-3x4	I	1700			131.1	GD	Own	Own	DC	Own-SP	SG	2	13¼*	6¼*	787	FK
I.H.C.-McC.-D.[3] O-12	60	104½	54¾	52	3200	9¼	9			Y	3	3.62	6.12	10.62		3.62			6.00/16	11.25/24	4-3x4	I				131.1	GD	Own	Own	DC	Roc-SP	SG	2	13¼*	6¼*		FK
I.H.C.-McC.-D.[3] 10-20	78	123	60		4265	15		21.6	13.5	Y*	3	2.25	3.00	4.25		2.62	30x4¼	42x12	6.00/20	11.25/28	4-4¼x5	I	1000			283.7	GKD	Own	Own	CS	Own-SP	SG	2	15¼	7	645	FK
I.H.C.-McC.-D.[3] W-30	72½	121¾	66¼		4820	13½				Y*	4	2.12	2.75	3.37	4.12	2.37	30x4½	42x12	6.00/20	12.75/28	4-4¼x5	I	1200			283.7	GD	Own	Zen	CS	Own-SP	SG	2	15¼	8½	704	FK
I.H.C.-McC.-D.[3] W-40	85	141½	65¾		6630	17	10⅛	44.8	28.3	Y*	4	2.12	2.75	3.75	4.37	2.75	34x6	50x12	7.50/20	12.75/32	6-3¾x4½	I	1750			298.2	GD	Own	Zen	DC	Own-SP	SG	2	15 11/16	9	645	FK
I.H.C.-McC.-D.[3] WD-40	85	141½	65¾		7550	17	10⅛	44.04	27.99	Y*	4	2.12	2.75	3.62	4.25	2.75	34x6	50x12	7.50/20	12.75/32	4-4¾x6½	I	1100			460.8	O			DC	Own-SP	SG	2	16¾	9	588	FK
John Deere A	87¼	130	86	61½	3697	8	10½	NR	NR	Y	4		3.0				24x4	50x6	5.50/16	9.00/36	2-5½x6½	I	975			309.0	D	ES	MS	DC	Own-DP	SG	2	12¾	7⅜	975	FK
John Deere B	85	125½	85	56	2763	8	10½	NR	NR	Y	4		3.0				22x3¼	48x5¼	5.00/15	7.50/36	2-4¼x5¼	I	1150			149.0	D	Wi	MS	DC	Own-DP	SG	2	10⅝	6	1150	FK
John Deere D	70	130	66½	58¼	5114	13½	10	NR	NR	Y	3		3.25				28x6	46x11⅛	7.50/18	12.75/28	2-6¾x7	I	900			501.0	D	ES	MS	DC	Own-MD	Cha	2	13¼	8½	900	FK
John Deere G	90¼	135	84	61½	4400	8½	11½	NR	NR	Y	4		3.25				24x5	51½x7	6.00/16	10.00/36	2-6⅛x7	I	975			413.0	D	ES	MS	DC	Own-MD	SG	2	12¾	8½	975	FK
Mass.-Harr.[4] 25	84	135	65½	57	5083	13	10 13/16	41	26	Y*	3	2.5	3.25	4.0		2.5	30x6	48x12	7.50/18	13.50/28°	4-4⅜x5¾	I	1200			345.8	GKD	Bos	Kin	DC	TD-SP	SG	2	19	7⅛	525	FK
Mass.-Harr.[4]-Pace. PA	78	122¼	56	53	3700	11½	10	26	16	Y*	4	2.4	3.3	4.1	8.5	3.0	28x5	44x10	6.00/16	12.75/24°	4-3⅞x5¼	I	1200			247.7	GKD	FM	Kin	DC	TD-SP	SG	2	12	6¼	831	FK
Mass.-Harr.[4]-Chall. CH	91¼	129¼	88°	57⅝	3860		22½	26	16	Y	4	2.4	3.3	4.1	8.5	3.0	24x4½	52x8	5.50/16	11.25/36°	4-3⅞x5¼	I	1200			247.7	GKD	FM	Kin	DC	TD-SP	SG	2	12	6¼	831	SA
Minneap.-Moline ZTS	72¾	126½	53¾	82	3650	7¼	22¾	24	15	Y	5	2.18	2.62	3.13	4.57[5]	1.00	25x4½	50x8	5.50/16	9.00/36	4-3⅝x4½	F	1500	33-1500	120-1100	185.7	GKD	FM	Sch	DC	TD-SP	SG	2	14	6½	790	FK
Minneap.-Moline FTA	84	137	68	92½	6070	7	9¾	32	21	Y	3	2.36	3.17	4.45		1.74	34x5¾	50x12	32x6	12.75/28	4-4⅝x6	I	1075	54-1075	273-650	403.2	GKD	Bos	Sch	DC	TD-SP	SG	2	16	7½	650	FK
Minneap.-Moline KTA	78¼	131	59	93½	4450	8	21	30	19	Y	3	2.1	3.1	4.1		1.8	28x5	42x10	6.00/16	11.25/24	4-4¼x5	I	1150	41-1150	187-1000	283.1	GKD	FM	Sch	DC	TD-SP	SG	2	14	7	820	FK
Minneap.-Moline MTS	90½	143	93	90½	5040	8½	21	30	19	Y	3	2.1	3.1	4.1		1.8	24x5	42x10	6.00/16	10.00/36	4-4¼x5	I	1150	41-1150	187-1000	283.1	GKD	FM	Zen	DC	TD-SP	SG	2	14	7	822	
Minneap.-Moline ZTN	82	132	79	82	3600	7½	22¾	24	15	Y	5	2.18	2.62	3.13	4.57[5]	1.00		50x8	9.00/10	9.00/36	4-3⅝x4½	F	1500	33-1500	120-1100	185.7	GKD	FM	Sch	DC	TD-SP	SG	2	14	6½	790	SA
Minneap.-Moline ZTU	82	132	79	82	3650	7½	22¾	24	15	Y	5	2.18	2.62	3.13	4.57[5]	1.00	25x4½	50x8	5.50/16	9.00/36	4-3⅝x4½	F	1500	33-1500	120-1100	185.7	GKD	FM	Sch	DC	TD-SP	SG	2	14	6½	790	SA
Oliver Row Crop 70HC	90½	133¾	80½	58	3200	8	17¼	25.13	16.94	Y*	4	2.44	3.32	4.33	5.88	2.44	24x4½	55x9/16	5.50/16°	9.00/40	6-3⅛x4⅜	I	1500	28-1500	105-1200	201.3	G	Bos	Zen	DC	B&B-SP	SG	2	12¾	7¼	774	SA
Oliver Row Crop 70KD	90½	133¾	80½	58	3220	8	17¼	24.49	16.53	Y*	4	2.44	3.32	4.33	5.88	2.44	24x4½	55x9/16	5.50/16°	9.00/40	6-3⅛x4⅜	I	1500	27-1500	105-1200	201.3	KD	Bos	Zen	DC	B&B-SP	SG	2	12¾	7¼	774	SA
Oliver Standard 70HC	72	120½	61½	51	3100	11½	11¾	24.95	15.89	Y*	4	2.44	3.32	4.33	5.88	2.44	27x4½	42x10	5.50/16°	9.00/24°	6-3⅛x4⅜	I	1500	28-1499	105-1200	201.3	G	Bos	Zen	DC	B&B-SP	SG	2	12¾	7¼	774	FK
Oliver Standard 70KD	72	120½	61½	51	3120	11½	11¾	23.89	15.87	Y*	4	2.44	3.32	4.33	5.88	2.44	27x4½	42x10	6.00/16°	11.25/24°	6-3⅛x4⅜	I	1500	27-1500	105-1200	201.3	KD	Bos	Zen	DC	B&B-SP	SG	2	12¾	7¼	774	FK
Oliver Orchard 70HC	72	120½	61½	51	3175	11½	11¾	24.95	15.89	Y*	4	2.44	3.32	4.33	5.88	2.44	27x4½	42x10	5.50/16°	9.00/24°	6-3⅛x4⅜	I	1500	28-1499	105-1200	201.3	G	Bos	Zen	DC	B&B-SP	SG	2	12¾	6½	774	FK
Oliver Orchard 70KD	72	120½	61½	51	3195	11½	11¾	23.89	15.87	Y*	4	2.44	3.32	4.33	5.88	2.44	27x4½	42x10	6.00/16°	11.25/24°	6-3⅛x4⅜	I	1500	27-1500	105-1200	201.3	KD	Bos	Zen	DC	B&B-SP	SG	2	12¾	6½	774	FK
Oliver Row Crop 80HC	93 11/16	144	80	61½	4545	8½	17½	33	21	Y*	3	2.6	3.2	4.15		2.9	24x4½	59½x9/16	6.00/16°	11.25/42	4-4¼x5¼	I	1200	37-1200	180-900	298.0	G	Bos	Sch	DC	B&B-SP	SG	2	14½	7¼	700	SA
Oliver Row Crop 80KD	93 11/16	144	80	61½	4565	8½	17½	33	21	Y*	3	2.6	3.2	4.15		2.9	24x4½	59½x9/16	6.00/16°	11.25/42	4-4½x5¼	I	1200	37-1200	180-900	314.0	KD	Bos	Sch	DC	B&B-SP	SG	2	14½	7¼	700	SA

Oliver... Standard 80HC	72½	112	61	53½	4200	12½	10	33	21	Y*	3	2.6	3.2	4.15	......	2.9	28x5	44x10	7.50/16°	12.75/24°	4-4¼x5¼	I	1200	37-1200	180-900	298.0	G		Bos	Sch	DC	B&B-SP	SG	2	14½	7¼	726	FK
Oliver... Standard 80KD	72½	112	61	53½	4220	12½	10	33	21	Y*	3	2.6	3.2	4.15	......	2.9	28x5	44x10	6.00/16°	11.25/24°	4-4¼x5¼	I	1200	37-1200	180-900	314.0	KD		Bos	Sch	DC	B&B-SP	SG	2	14½	7¼	726	FK
Oliver.......90	80	125¾	65	59½	5700	14	10½	44	28	Y*	4	2.23	3.32	4.32	5.55	2.9	29x6	46x12	7.50/18°	12.75/28°	4-4¾x6¼	I	1125	49-1132	250-900	443.0	KD		Bos	Ens	DC	B&B-SP	SG	2	16¾	8¼	596	FK
Oliver.......99	80	125¾	65	59½	5900	14	10½	50	32	Y*	4	2.23	3.32	4.32	5.55	2.9	29x6	46x12	7.50/18°	13.50/28°	4-4¼x6¼	I	1125	57-1125	295-900	443.0	G		Bos	Ens	DC	B&B-SP	SG	2	16¾	8¼	596	FK
Silver King [6]... 4 Wheel	60	97	Var	60	2050	9	15	17	10	Y*	4	1.77°	2.82°	4.97°	12.05°	1.31°	24x4*	42x8*	5.50/16°	9.00/24°	4-3¼x4	L	1400	46-3200	92-1800	133.0	G		Bos°	Zen	DC	B&B-SP	SG	2	8*	6½	1400	FK
Silver King [6]... 3 Wheel	78½	128	Var	64	2475	7	24	20	13	Y*	4	1.77°	2.82°	4.97°	12.05°	1.31°	28x8*	42x10*	6.00/16°	9.00/24°	4-3¼x4	L	(e)	46-3200	92-1800	133.0	G		Bos°	Zen	DC	B&B-SP	SG	2	8*	6½	(e)	FR
Silver King [6]...... Ind.	60	107⅜	Var	58	2940	9	10	......	14	Y*	4	1.48°	2.36°	4.16°	10.08°	1.09°	....	....	6.00/9°	7.50/20°	4-3¼x4	L	(r)	46-3200	92-1800	133.0	G		Au	Zen	DC	B&B-SP	SG	..	8*	6½	(f)	FK
Wetmore......... 12-20	72	104	70	52	2900	14	12½	20	12	N	3	2.25	3.50	5.25	......	1.75	28x	40x	....	....	4-3¾x5½	I	1150	25-1150	....	.....	GD		Spl	Zen	DC	Ful-Mo	IG	2	12		960	FK

TRACK-LAYING TYPE

MAKE AND MODEL	Track Length on Ground (In.)	OVERALL DIMENSIONS (In.) Length	Width	Height	Net Weight (Lbs.)	Minimum Turning Radius (Ft.)	Ground Clearance (In.)	Hp. RATING Belt	Drawbar	Power Take-off	No. of Forward Speeds	PLOWING SPEED M.P.H. First	Second	Third	Fourth	Reverse	TRACK Width	Gage—Center to Center	ENGINE Make	No. of Cylinders Bore and Stroke	Valve Arrangement	R.P.M. at Normal Operating Speeds	Maximum Brake HP. at Specified R.P.M.	Maximum Torque (Lb. Ft.) at R.P.M.	Cu. In. Displacement	Fuel Recommended	Ignition Make	Carburetor Make	Air Cleaner Make	Oiling System Type	CLUTCH Make and Type	Transmission Make	Drive Type to Traction Members	No. of Drive Wheels	BELT PULLEY Diameter (In.)	Face (In.)	Normal R.P.M.	Steering Type
Allis-Chalmers.......M	56 7/16	101⅜	57¼	56 13/16	6500	6	8⅞	37.38	39.98	Y	4	2.23	3.20	4.15	1.83[7]	2.55	12	40	Own	4-4½x5	I	1200	36-1200	172-720	318.0	G	FM	Zen	Don	DC	Roc-SP	Own	SG	2S	10[9]	8¾	960	DM
Allis-Chalmers.....WM	56 7/16	101⅜	67¼	56 13/16	6790	6½	8⅞	37.88	30.98	Y	4	2.23	3.20	4.15	1.83[7]	2.55	(h)	(k)	Own	4-4½x5	I	1200	36-1200	172-720	318.0	G	FM	Zen	Don	DC	Roc-SP	Own	SG	2S	10[9]	8¾	960	DM
Allis-Chalmers.......K	67	119 9/16	65⅞	64	10688	7	11	57.99	49.58	Y	4	1.72	2.59	3.26	5.92	2.10	15	48	Own	4-5x6½	I	1050	68-1050	340-675	510.0	G	FM	Zen	Vor	DC	Own-SP	Own	SG	2S	10[9]	8¾	1050	DM
Allis-Chalmers.....WK	67	119 9/16	80⅞	64	11100	7	11	57.99	49.58	Y	4	1.72	2.59	3.26	5.92	2.10	28	63	Own	4-5x6½	I	1050	68-1050	340-675	510.0	G	FM	Zen	Vor	DC	Own-SP	Own	SG	2S	10[9]	8¾	1050	DM
Allis-Chalmers.....KO	67	119 9/16	65⅞	64	11012	7	11	57.99	49.58	Y	4	1.72	2.59	3.26	5.92	2.10	15	48	Own	4-5¼x6½	I	1050	70-1050	370-750	563.0	O	Mal	(m)	Un	DC	Own-SP	Own	SG	2S	10	8¾	1050	DM
Allis-Chalmers....WKO	67	119 9/16	80⅞	64	11425	7	11	57.99	49.58	Y	4	1.72	2.59	3.26	5.92	2.10	28	63	Own	4-5¼x6½	I	1050	70-1050	370-750	563.0	O	Mal	(m)	Un	DC	Own-SP	Own	SG	2S	10	8¾	1050	DM
Allis-Chalmers......SO	77 3/32	146	96⅝	74 3/16	19500	9	15½	75	64	Y	5	1.52	2.32	3.25	4.55[8]	1.76	18	74	Own	4-5¾x6½	I	1050	83-1050	440-800	675.0	O	Mal	(m)	Un	DC	Roc-SP	Own	SG	2S	13⅜	10	770	DM
Allis-Chalmers.......L	85 7/16	153¼	93	81¼	21550	9	14⅜	95.33	79.14	Y	6	1.48	1.94	2.68	3.50[9]	(p)	16	68	Own	6-5¼x6½	I	1050	102-1050	550-700	844.0	G	FM	Zen	Vor	DC	Own-DP	Own	SG	2S	18	15	580(r)	DM
Allis-Chalmers......LO	85 7/16	153¼	93	81¼	23000	9	14⅜	95.33	79.14	Y	6	1.48	1.94	2.68	3.50[9]	(p)	20	68	Own	6-5¼x6½	I	1050	102-1050	560-750	844.0	O	Mal	(m)	Un	DC	Own-DP	Own	SG	2S	18(s)	15	580(r)	DM
Caterpillar [1]........22	54½	108	57¾°	56⅛	6210	5⅓°	9	31.96	25.79	Opt	3	2.0	2.6	3.6	....	2.1	10°	40°	Own	4-4x5	I	1250	....	144-940	251.0	GKD	Eis	Zen	Don	DC	Own-SP	Own	SG	2S	10½	7½	950	DM
Caterpillar [10].........R4	61⅛	129	62°	60⅝	9010°	6⅚°	11⅛	40.83	35.33	Opt	5	1.7	2.4	3.4	3.7[11]	1.9	13°	44°	Own	4-4¼x5½	I	1400	....	178-900	312.0	GKD	Eis	Zen	Don	DC	Own-SP	Own	SG	2S	12	8½	840°	DM
Caterpillar [10].. Diesel D4	61⅛	113 9/16	62°	60⅝	9470°	6°	11⅛	41.17	35.68	Opt	5	1.7	2.4	3.0	3.7[11]	1.9	13°	44°	Own	4-4¼x5½	I	1400	....	180-900	312.0	O	......	.....	Don	DC	Own-SP	Own	SG	2S	12	8½	840°	DM
Caterpillar [10].........R5	74¾	139⅜	75°	72 3/16	13260°	7	10⅛	64.28	54.99	Opt	4	1.9	2.8	3.6	5.1	2.1	16°	56°	Own	4-5½x6½	I	950	....	380-700	618.0	G	Eis	Zen	Don	DC	Own-SP	Own	SG	2S	12	10¾	950	DM
Caterpillar [10].........DS	74¾	128⅜	75°	74¼	14820°	7	10⅛	51.86	44.75	Opt	4	1.7	2.5	3.2	4.6	1.9	16°	56°	Own	3-5¾x8	I	850	....	350-650	623.0	O	......	.....	Don	DC	Own-SP	Own	SG	2S	12	10¾	850	DM
Caterpillar [10].. Diesel D7	81⅞	150¼	81⅝°	81 5/16	20320°	7⅔	11¼	71.31	61.75	Opt	4	1.6	2.4	3.4	4.7	1.9	18°	60°	Own	4-5¾x8	I	850	....	482-650	831.0	O	......	.....	Don	DC	Own-SP	Own	SG	2S	13⅜	13	752	DM
Caterpillar [10]. Diesel D8	97⅝	183	103¾	90	32600	9½	10½	108.37	95.84	Opt	6	1.7	2.4	2.8	3.2[12]	2.8	20°	78	Own	6-5¾x8	I	850	....	780-650	1246.0	O	......	.....	Don	DC	Own-SP	Own	SG	2S	14 7/16	15	719	DM
Cletrac, Diesel......AD	62	109½	57¼	52	7600	....	13½	35.0	28.0	Y	3	1.78	2.61	3.74	....	1.36	12°	42	Buda	4-3⅝x4¾	I	1530	....	....	196.0	O	......	(x)	Vor	DC	Long-DP	Own	SG	2	10½	8½	1275	DM
Cletrac.........E31	56½	105½	41¼	55½	5000	....	14	30.5	22.11	Y	3	2.1	2.78	3.97	....	1.62	8	31	Herc	4-4x4½	L	1300	34-1300	144-900	226.2	GKD	Bos	Til	Vor	DC	Long-DP	Own	SG	2	12	8½	860	DM
Cletrac.........E38	56½	105½	48 5/16	55½	5050	....	14	30.5	22.11	Y	3	2.1	2.78	3.97	....	1.62	8°	38	Herc	4-4x4½	L	1300	34-1300	144-900	226.2	GKD	Bos	Til	Vor	DC	Long-DP	Own	SG	2	12	8½	860	DM
Cletrac.........E62	56½	105½	78½	55½	5075	....	18	30.5	22.11	Y	3	2.1	2.78	3.97	....	1.62	8°	62	Herc	4-4x4½	L	1300	34-1300	144-900	226.2	GKD	Bos	Til	Vor	DC	Long-DP	Own	SG	2	12	8½	860	DM
Cletrac.........E68	56½	105½	84½	55½	5100	....	18	30.5	22.11	Y	3	2.1	2.78	3.97	....	1.62	8°	68	Herc	4-4x4½	L	1300	34-1300	144-900	226.2	GKD	Bos	Til	Vor	DC	Long-DP	Own	SG	2	12	8½	860	DM
Cletrac.........E76	56½	105½	92½	55½	5125	....	18	30.5	22.11	Y	3	2.1	2.78	3.97	....	1.62	8°	76	Herc	4-4x4½	L	1300	34-1300	144-900	226.2	GKD	Bos	Til	Vor	DC	Long-DP	Own	SG	2	12	8½	860	DM
Cletrac.........AG	62	109½	57¼	52	6800	....	13½	34.2	27.0	Y	3	1.78	2.61	3.74	....	1.36	12°	42	Herc	4-4x4½	L	1530	38-1530	144-900	226.2	GKD	Bos	Til	Vor	DC	Long-DP	Own	SG	2	10½	8½	1275	DM
Cletrac.........BG	63	116	60⅛	57⅜	8350	....	15¼	44.0	35.0	Y	3	1.81	2.64	3.46	....	1.38	14°	44	Herc	6-3¾x4½	L	1530	49-1530	176-900	282.0	GKD	Bos	Til	Vor	DC	Long-DP	Own	SG	2	12	8½	1145	DM
Cletrac, Diesel......BD	63	116	60⅛	57⅜	8800	....	15¼	41.0	35.0	Y	3	1.81	2.64	3.46	....	1.38	14°	44	Herc	6-3½x4½	I	1530	52-1530	178-1400	259.7	O	......	(x)	Vor	DC	Long-DP	Own	SG	2	12	8½	1145	DM
Cletrac.........CG	74¾	119¾	67¼	64 15/16	11500	....	15¾	56.0	44.6	Y	3	1.87	3.06	4.45	....	2.29	14°	48	Herc	6-4¼x4½	L	1565	74-1565	264-1100	383.0	GKD	Bos	Til	Vor	DC	Long-DP	Own	SG	2	13	11	1015	DM
Cletrac.........DG	74¾	124⅞	67¼	62 5/16	12000	....	15¾	69.0	60.0	Y	3	1.95	2.92	4.65	....	1.95	15°	48	Herc	6-4⅝x5¼	L	1300	84-1300	348-950	529.2	GKD	Bos	Til	Vor	DC	Long-DP	Own	SG	2	13	11	960	DM
Cletrac, Diesel......DD	74¾	124⅞	67¼	62 5/16	12700	....	15¾	67.71	61.18	Y	3	1.8	2.68	4.3	....	1.79	15°	48	Herc	6-4⅜x5¼	I	1200	80-1200	348-1250	474.0	O	......	(x)	Vor	DC	Long-DP	Own	SG	2	13	11	884	DM
Cletrac.........FG	96	173	94½	84	24500	....	16¼	110.9	94.0	Y	3	1.75	2.5	4.3	....	2.1	20	67	Herc	6-5¾x6	L	1120	126-1120	600-950	935.0	GKD	Bos	Til	Vor	DC	Long-DP	Own	SI	2	24½	15	510	DM
Cletrac, Diesel......FD	96	173	94½	84	25800	....	16¼	107.5	93.0	Y	3	1.75	2.75	4.25	....	2.1	20	67	Herc	6-5x6	I	1300	132-1300	538-1400	707.0	O	......	(x)	Vor	DC	Long-DP	Own	SI	2	24½	15	535	DM
I.H.C.[3].........T-20	52½	112½	56	57	6725	6	7 13/16	29.77	24.44	Y*	3	1.50	2.75	3.75	....	2.0	10	41½	Own	4-3¾x5	I	1250	....	139-850	220.9	GKD	Own	Zen	Own	CS	Own-SP	Own	SG	2S	15¼*	7	645	DM
I.H.C.[3].........T-35	64⅜	132⅛	59¼	68	10070	7	11 15/16	46.22	38.68	Y*	5	1.75	2.25	2.75	3.25[13]	2.25	13	45	Own	6-3⅝x4½	I	1750	....	180-800	287.7	GD	Own	Zen	Don	DC	Roc-SP	Own	SG	2S	16¾*	9	619	DM
I.H.C.[3], Diesel...TD-35	64⅜	132⅛	59¼	68	10560	7	11 15/16	43.47	37.97	Y*	5	1.75	2.25	2.75	3.25[13]	2.25	13	45	Own	4-4½x6½	I	1100	....	268-500	414.0	O	......	.....	Don	DC	Roc-SP	Own	SG	2S	16¾*	9	591	DM
I.H.C.[3].........T-40	70	140	63¾	68	12000	7	10⅛	54.05	46.67	Y	5	1.75	2.25	2.75	3.25[13]	2.25	16	47¾	Own	6-3¾x4½	I	1750	....	195-800	298.2	GD	Own	Zen	Don	DC	Roc-SP	Own	SG	2S	16¾*	9	619	DM
I.H.C.[3], Diesel...TD-40	70	140	63¾	68	12400	7	10⅛	50.73	44.68	Y	5	1.75	2.25	2.75	3.25[13]	2.25	16	47¾	Own	4-4¾x6½	I	1100	....	....	460.8	O	......	.....	Don	DC	Roc-SP	Own	SG	2S	16¾*	9	591	DM

ABBREVIATIONS FOR WHEEL AND TRACK-LAYING TYPES

°—Others also
*—Special Equipment
1—Fifth 19.66 M.P.H.
2—Fifth 22.49 M.P.H.
3—International Harvester Co.
4—Massey-Harris Co.
5—Fifth 14.3 M.P.H.
6—Fate-Root-Heath Co.
7—Special Fourth 5.82 M.P.H. available.
8—Fifth 6.37 M.P.H.
9—Fifth 4.90, Sixth 6.41 M.P.H.
10—Also built in wide track models.
11—Fifth 5.4 M.P.H.
12—Fifth 3.9, Sixth 5.3 M.P.H.
13—Fifth 4.0 M.P.H.
(a)—Steel Wheels 2700 lbs., Rubber Tires 3300 lbs.
Au—Auto-Lite
(b)—Steel Wheels 2935 lbs., Rubber Tires 3665 lbs.
B&B—Borg and Beck
Bos—Bosch
(c)—Steel Wheels 4220 lbs., Rubber Tires 4620 lbs.
Cha—Chain
Co—Cone Type
CS—Circulating Splash
(d)—Steel Wheels 4900 lbs., Rubber Tires 5400 lbs.
D—Distillate
DC—Drilled Crankshaft
Del—Delco-Remy
DM—Driving Members
Don—Donaldson
DP—Double plate—Dry
(e)—1400-1800 R.P.M.
Eis—Eisemann
Ens—Ensign
ES—Edison-Splitdorf
(f)—1400-2400 R.P.M.
F—In Head and Side ("F" Head)
FK—Front Axle Knuckle
FM—Fairbanks Morse Co.
Ful—Fuller
(g)—Also available in 12 in. dia.
G—Gasoline
(h)—12 to 20 in.
Herc—Hercules
I—In Head
IG—Internal Gear
(k)—40 to 50 in.
K—Kerosene
Kin—Kingston
L—"L" Head
(m)—Delco Injection System
Mal—Mallory
MD—Multiple Disk
Mo—Multiple Disk in Oil
MS—Marvel-Schebler
N—No or None
NR—Not Rated
O—Oil
Opt—Optional
(p)—Low Reverse 1.72, High Reverse 2.25 M.P.H.
(r)—Also 444 R.P.M.
RF—Rotating Fork
Roc—Rockford
(s)—Also available in 20 in. dia.
S—Sprockets
SA—Swinging Axle
Sbe—Spiral Bevel Gear
Sch—Schebler
SG—Spur Gear
SI—Spur and Internal Gear
SO—Single Plate, in Oil
SP—Single Plate, Dry
Spl—Splitdorf
TD—Twin Disk
Til—Tillotson
Un—United
Var—Various Widths
Vor—Vortex
WG—Worm Gear
Wi—Wico
(x)—Bosch Fuel Injection Pump
Y—Yes
Zen—Zenith
ZK—Zenith or Kingston

Car Dealer Representation—By Population Groups—By States*

(As of January 1, 1938)

	POPULATION DIVISIONS										
	0-1000	1000-2500	2500-5000	5000-10,000	10,000-25,000	25,000 50,000	50,000 100,000	Over 100,000	Total Dealer Representation	Exclusive Dealer Representation	Combined Dealer Rep. Handling Two or More Cars
Alabama	62	117	88	58	108	...	31	36	500	189	311
Arizona	28	67	56	66	...	40	...	...	257	86	171
Arkansas	107	131	179	80	76	19	23	...	615	306	309
California	430	496	506	514	426	198	151	421	3,142	1,189	1,953
Colorado	128	149	86	119	81	18	21	64	666	305	361
Connecticut	90	127	118	119	220	104	49	116	943	325	618
Delaware	16	29	30	...	...	...	...	24	99	35	64
Dist. of Col.	...	...	...	...	...	...	...	136	136	60	76
Florida	63	130	157	152	83	75	...	97	757	278	479
Georgia	84	207	142	146	115	16	63	36	809	333	476
Idaho	131	105	127	79	35	...	...	...	477	198	279
Illinois	730	669	483	502	402	266	150	509	3,711	1,562	2,149
Indiana	353	339	284	294	254	144	60	192	1,920	829	1,091
Iowa	772	567	423	170	173	107	67	36	2,315	992	1,323
Kansas	505	416	245	162	223	15	20	59	1,645	733	912
Kentucky	234	261	185	139	90	78	21	61	1,069	414	655
Louisiana	60	96	121	87	51	37	21	37	510	243	267
Maine	84	116	119	119	78	33	25	...	574	288	286
Maryland	238	117	105	21	51	38	...	142	712	247	465
Massachusetts	72	114	183	260	418	206	124	349	1,726	759	967
Michigan	595	577	294	325	290	121	161	379	2,742	1,158	1,584
Minnesota	867	527	308	203	192	...	...	226	2,323	1,030	1,293
Mississippi	112	128	108	38	131	37	...	...	554	227	327
Missouri	368	387	255	202	152	20	40	224	1,648	767	881
Montana	221	158	47	74	71	36	...	...	607	246	361
Nebraska	487	379	147	109	83	...	32	57	1,294	575	719
Nevada	60	72	31	15	21	...	...	...	199	69	130
New Hampshire	56	75	54	20	95	36	22	...	358	169	189
New Jersey	153	200	183	310	366	144	114	195	1,665	616	1,049
New Mexico	54	52	60	40	28	19	...	...	253	94	159
New York	885	811	647	428	723	191	159	889	4,733	1,745	2,988
North Carolina	133	233	142	161	161	47	100	...	977	442	535
North Dakota	429	158	16	75	46	19	...	...	743	373	370
Ohio	747	645	453	493	432	253	66	659	3,748	1,637	2,111
Oklahoma	182	315	222	247	177	40	9	64	1,256	627	629
Oregon	182	158	138	150	78	20	...	51	777	309	468
Pennsylvania	994	670	793	717	846	209	256	495	4,980	1,915	3,065
Rhode Island	24	44	19	11	37	79	28	86	328	120	208
South Carolina	47	98	85	91	66	37	36	...	460	231	229
South Dakota	281	202	71	13	81	17	...	...	665	342	323
Tennessee	102	126	170	131	42	22	...	118	711	257	454
Texas	537	789	499	415	264	75	99	196	2,874	1,362	1,512
Utah	64	86	72	40	18	20	...	34	334	134	200
Vermont	71	96	37	60	57	...	...	...	321	124	197
Virginia	361	187	112	93	94	80	18	64	1,009	445	564
Washington	302	214	195	46	166	42	...	144	1,109	454	655
West Virginia	160	195	90	132	92	36	76	...	781	307	474
Wisconsin	1,040	536	376	269	192	180	71	142	2,806	1,051	1,755
Wyoming	70	126	29	39	33	...	...	...	297	110	187
Totals	13,771	12,497	9,290	8,034	7,918	3,174	2,113	6,338	63,135	26,307	36,828

* Chilton Trade List count.

Car Dealer Representation—By Population Groups—By Makes*

(As of January 1, 1938)

	Population Divisions										
CAR MAKE	0-1000	1000-2500	2500-5000	5000-10.000	10,000 25,000	25,000 50,000	50,000 100,000	Over 100,000	Total Dealer Represen-tation	Dealers Handling This Make Exclusively	Dealers Handling This Make and in Addition One or More Other Makes
Buick	289	523	524	504	465	168	95	182	2750	1093	1657
Cadillac	22	43	68	129	215	124	87	115	803	186	617
Chevrolet	3366	2169	1092	711	589	176	136	513	8752	7209	1543
Chrysler	831	831	604	502	461	177	99	332	3837	......	3837
De Soto	591	493	417	397	410	170	109	339	2926	......	2926
Dodge	954	912	737	606	506	180	110	375	4380	......	4380
Ford	2775	2071	1058	705	579	218	175	664	8245	6193	2052
Graham	77	69	76	110	182	104	85	174	877	620	257
Hudson-Terraplane	614	579	518	469	459	168	124	459	3390	2730	660
Hupmobile	16	18	15	34	53	47	38	81	302	156	146
Nash	203	222	228	260	325	149	108	258	1753	1344	409
Oldsmobile	262	466	489	427	430	162	99	253	2588	1188	1400
Packard	50	72	152	225	327	149	87	221	1283	710	573
Pierce-Arrow	2	2	2	7	10	5	9	33	70	18	52
Plymouth	2376	2236	1758	1505	1377	527	318	1046	11,143	......	11,143
Pontiac	619	914	714	593	528	197	111	330	4006	2447	1559
Studebaker	288	315	344	366	417	185	114	306	2335	1675	660
Willys	219	211	198	178	239	109	86	236	1476	691	785
Miscellaneous	217	351	296	306	346	159	123	421	2219	52	2167
SUMMARY	13.771	12.497	9,290	8.034	7.918	3,174	2,113	6,338	63,135	26,312	36,823
Per Cent of Total	21.81	19.79	14.71	12.73	12.54	5.03	3.35	10.04	100.00	......	......

* Chilton Trade List count.

For additional dealer counts see page 260.

Labor

UAW Continues Active In Relief Campaign

While "marking time" awaiting commencement of actual negotiations on agreement revisions with General Motors and Chrysler, officials of the United Automobile Workers continued active this week through public announcements of their campaign for greater relief appropriations for Detroit, Michigan and other automotive centers.

Included in their activity were bitter attacks on Mayor Richard W. Reading of Detroit, who has been conducting an investigation to uncover relief "chiselers." The union charged that the mayor's investigation of relief abuses is an undercover attack on labor and public officials suspected of labor sympathies.

No definite date for opening of formal discussions of the General Motors agreement have been announced, although it is understood that informal conversations are being held from time to time. Negotiations with Chrysler are now scheduled to begin on March 14. In its relations with both corporations there is an apparent, though unexpressed, desire on the part of the union to maintain relationships which are more friendly, or at least less aggressive, than the attitudes in effect when the original agreements were a year ago.

In explaining its stand in connection with the National Labor Relations Board hearing which opened in Anderson, Ind., this week, the union explained, for example, that "the UAW does not want to fight General Motors, but we have to defend ourselves."

The hearing involves a complaint filed with the NLRB by the UAW against the Delco-Remy Corp., a GM subsidiary. The case pertains only to the Anderson situation and represents the first time that UAW has filed charges against any GM unit.

"A company union filed a petition with the NLRB for recognition as sole collective bargaining agent and we had to act in self-defense," the UAW maintains.

The Ford Brotherhood of America will not affiliate with the UAW, in spite of the action of a group of reputed members at a meeting last week, according to George I. Smith, chairman of the board of trustees. An announcement signed by Smith declared that the meeting of unemployed Brotherhood members by John D. McDowell, former chairman and son of the union's attorney, was unauthorized and that the trustees had repudiated the action. McDowell's resignation has been accepted by the trustees.

At the meeting in question, which McDowell claimed was a meeting of unemployed members called to discuss their problems, the group voted to affiliate with the UAW when McDowell lost control.

W. C. COWLING

. . . newly elected vice-president of Willys-Overland Motors, Inc. Mr. Cowling was formerly associated with the Ford Motor Co. as general sales manager in charge of domestic and foreign sales and distribution. (See article on page 300).

Production

Gradual But Steady Improvement In New Passenger Car Sales

Although the current week showed more signs of improvement in sales of new passenger cars, as indicated by sales reports and more tangibly by orders received by factories from dealers, their influence has not yet been reflected in the total output of the industry, which will finish the fourth week of the month on a par with the previous two weeks.

Preliminary estimates indicate that the industry turned out between 54,000 and 55,000 cars and trucks during the past week, to equal the output of the two preceding weeks and to bring the total production for February thus far up to an estimated 210,000 units. With one more day of production in the month it appears that February can equal January's total of 223,000 units.

Gains shown by individual divisions of major producers as well as by some of the independents will show some shifting about in the relative position of the various makes of vehicles, but modifications in the schedules of other manufacturers were sufficient to keep the industry's total production figure to the level it has maintained for the past three weeks.

Factories are almost unanimous in reporting the increased success of their dealer organizations in their

(Turn to page 307, please)

$1,250,000 to Blast Used Car Jam

"National Used Car Exchange Week" Scheduled for March 5-12 Marks First Joint Effort of All U. S. Automobile Makers

One million and a quarter dollars will be expended in one week, March 5 to 12, in a campaign to be known as "National Used Car Exchange Week," which is aimed primarily at stimulating the disposal of used car stocks now in dealer hands. It is the first cooperative effort in which all American automobile manufacturers have taken part and is strategically timed at the outset of the spring selling season when both new and used cars usually begin to move in greatest volume.

The $1,250,000 will be spent by the cooperating manufacturers in newspaper, radio and outdoor advertising and in other promotional channels. Two-thirds of the advertising budget has been allotted to newspapers.

Formal announcement of the national drive was made by Alvan Macauley, who pointed out that, so far as the automobile industry is concerned, the most serious barrier to business improvement is the large stock of used cars in dealers' hands. Mr. Macauley said, "Until these cars can be sold, it is impossible for dealers to handle a normal volume of new-car business. This means that factories will be forced to continue on part-time, and thousands of men in the motor car plants and in allied industries must remain either out of work or on part-time schedules.

"The present situation has resulted in the best used car values in the country's history. We are confident that used car stocks will be reduced sharply as soon as the public becomes aware of that fact."

Cowling to Willys

Former Ford Sales Manager Named Vice-President

Emphasis on the development of a stronger domestic sales organization and extension of foreign operations are believed to be in the making for Willys-Overland Motors, Inc., following announcement of the appointment of William C. Cowling, for 23 years a leading executive in the Ford Motor Co., as vice-president effective March 1.

No other changes are contemplated in the present company set-up. Nelson A. Beardsley will remain as general sales manager, and Ralph J. Archer, vice-president of the Willys Export Corp., also will continue to have charge of foreign distribution.

Mr. Cowling's long experience in charge of traffic for Ford when he organized a system of merchant ships to carry parts and supplies to a far-flung organization and his nearly seven years as general sales manager have made him especially well fitted, in the belief of Toledo automotive executives, to take a big part in the general sales policy and direction of the company.

The new vice-president of Willys severed his connection with the Ford interests last November, but no specific reason was ever given for the change. Mr. Cowling since has associated himself with a brother in the ship brokerage and chartering business. However, that connection was simply a temporary arrangement.

It appears quite likely that Mr. Cowling may have a big part also in the development of the foreign markets for Willys. Recently Mr. Archer announced some new developments under way for overseas assembly of Willys units. Arrangements also are being made for extensive development in the Canadian field.

Sixty-Five Per Cent of All Tires Now Made Outside of Akron

Today, more than 65 per cent of all tires and 80 per cent of all rubber goods are being manufactured outside of Akron, as compared to the time when two-thirds of all rubber products were manufactured in Akron. This statement is published in the current issue of the "Goodrich Circle," employe publication of the B. F. Goodrich Co., in an article entitled "Rubber and Akron."

"Ten years ago, at least two-thirds of all rubber products manufactured in the United States were made in Akron," the article continues. "Akron led the industry. Goodrich, Miller, Goodyear, General, Firestone, Mohawk and many other Akron companies were the rubber industry for all practical purposes.

"Today, the situation is reversed. Akron is no longer the rubber manufacturing center of the world. This year, not more than one-third of all the rubber products made in the United States will be made in Akron. Akron no longer leads in volume; it now follows."

GM Expands Plant In Mexico

General Motors of Mexico is constructing an addition to its Mexico City plant built two years ago at a cost of $500,000 for the assembly of trucks and the distribution of passenger cars. An additional $500,000 will be spent on the new annex which will be used for assembling coaches.

MEN OF THE INDUSTRY

C. O. DRAYTON was recently named general sales manager of the American Screw Co., Providence, R. I.

GEORGE H. REAMA has been named factory manager of the American Screw Co., Providence, R. I.

R. M. ANDRESS has been elected second vice-president and foreign manager of the Barnes Drill Co., Rockford, Ill.

J. K. FITZGERALD has been named district sales manager for the new Cleveland branch of the Niagara Machine & Tool Works, Buffalo, N. Y. The company recently announced that a new factory branch office in the Leader Building, Cleveland, would be opened March 1.

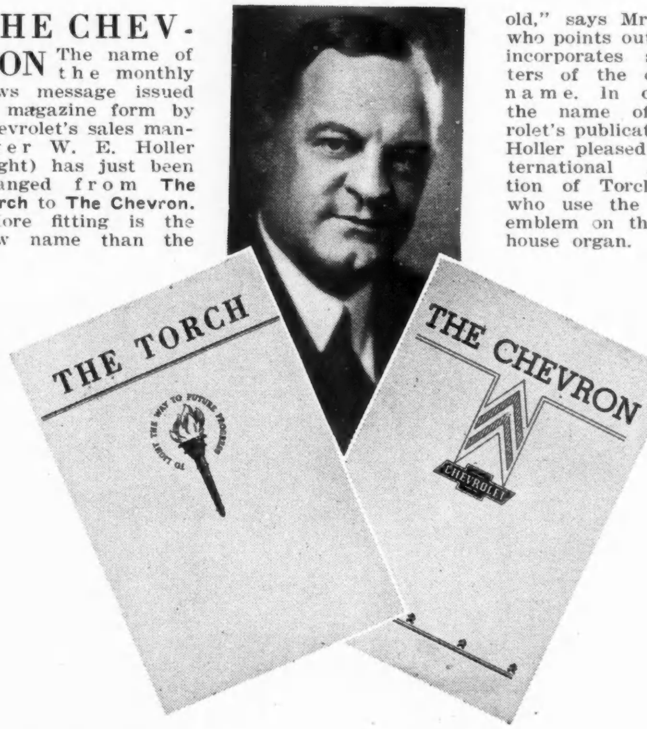
R. C. INGERSOLL, president of the Ingersoll Steel & Iron Works and vice-president of Borg-Warner Corp. has been elected a director of the Transportation Association of America.

H. A. HARVEY has been appointed vice-president of the USL Battery Corp. to succeed R. T. Pierson who has resigned. Mr. Harvey will be in full charge of activities at the company's Niagara Falls plant.

W. M. CAGE has been appointed district manager in New York and New England for the American Bantam Car Co., Butler, Pa. Mr. Cage was formerly associated with the Sun Mfg. Co., Chicago.

J. C. LUDDENS has been named district manager in Ohio and Indiana for the American Bantam Car Co., Butler, Pa.

THE CHEVRON The name of the monthly news message issued in magazine form by Chevrolet's sales manager W. E. Holler (right) has just been changed from **The Torch** to **The Chevron.** "More fitting is the new name than the old," says Mr. Holler who points out that it incorporates six letters of the company name. In changing the name of Chevrolet's publication, Mr. Holler pleased the International Association of Torch Clubs who use the torch emblem on their own house organ.



F. A. Seiberling Retires

Son Assumes Presidency of Seiberling Rubber Co.

Frank A. Seiberling, founder and former president of the Goodyear Tire & Rubber Co., and one of the tire industry's dominant figures for more than 40 years, Feb. 23 eased from his shoulders the wheels of the huge industry he helped to create and announced his retirement from the presidency of the Seiberling Rubber Co. of Akron. He becomes chairman of the company's board, a newly created post, with his son, J. Penfield Seiberling, who had been assistant to the president and vice-president in charge of sales, stepping into his shoes as president. Col. J. L. Cochrun, assistant sales manager, becomes vice-president in charge of sales.

Known as the "Little Napoleon" of the tire industry, Mr. Seiberling has been one of its most conspicuous figures since he founded the Goodyear Tire & Rubber Co., in a dilapidated strawboard box factory in East Akron in 1898 with $12,500 borrowed capital. He built Goodyear to the largest rubber goods and tire company in the world, and in the financial crisis of 1920, sacrificed a personal fortune of many millions of dollars to save the company from receivership. He retired from its presidency in that year and a year later, at the age of 61, staged one of the most dramatic comebacks in the annals of American business when he founded the Seiberling Rubber Co.

Seiberling invented the first tire building machinery to be used. He now is 78.

The new Seiberling Rubber Co. president is 39, one of the youngest chief executives in the industry. A graduate of Princeton and of the law school of Michigan University, he started with the company as a road salesman and seven years ago became vice-president in charge of sales.

Fred W. Rinshed

Fred W. Rinshed, president of the Rinshed-Mason Co., Detroit, died of pneumonia on Feb. 15. After working for the Schroeder Paint & Glass Co. he organized the Rinshed Gagnier Co. and later built-up the Rinshed-Mason Co.

E. R. Frederick

E. R. Frederick, former American representative of Citroen — French automobile manufacturing company —succumbed to a heart attack in New York this week. Frederick spent some time in Mexico as a mining engineer and then moved on to Paris, where he lived 13 years. When he decided to return to America, M. Citroen—a close personal friend —offered him the post as his American representative.

IHC Reports for 1937

U. S. and Foreign Sales Increase 38 Per Cent in Dollar Volume

The annual report of the International Harvester Co. for its fiscal year ending Oct. 31, 1937, indicated that net income from operations for the year was $36,343,000. The net income after providing for general inventory reserve and after making other adjustments was $32,493,000. Common stock dividends for 1937 totaled $4 per share.

Total sales increased from $254,934,000 in 1936 to $351,928 for 1937. Sales in the United States increased from $196,152,000 to $270,254,000, approximately 38 per cent. The report calls attention to the fact that the percentage of profit to sales proceeds was less in 1937 than in 1936, due to higher wage rates, higher costs of materials, higher taxes, and other increases.

The report compares sales in the United States for 1936 and 1937, showing an increase of tractor trade from $63,235,000 to $89,318,000. Farm implement sales increased from $53,195,000 to $75,638,000. Motor truck sales increased from $61,305,000 to $76,100,000 and the proceeds from sales of steel, binder twine,

etc., increased from $18,417,000 to $29,198,000.

Capital expenditures amounted to $15,136,000, as against $10,005,000 for the preceding 10 months. The $15,136,000 included $6,001,000 for additional motor truck and tractor production facilities; $4,694,000 for completion of steel mill additions, expenditures at iron ore and coal mines, and modernization of merchant mills.

The total number of employes in the United States during 1937, according to the report, averaged 59,347, as against 50,400 in 1936. Two general wage increases were made at all the United States operations. The total amount received in wages, salaries and extra compensation during the fiscal year 1937 by all employes (exclusive of executive officers) in the United States and abroad was $125,000,000. Compensation of the 14 executive officers amounted to $719,000.

Packard's 1937 Net Profits Estimated at $3,000,000

Preliminary figures released this week show that Packard Motor Car Co. and subsidiaries earned net profits of approximately $3,000,000 after all charges in 1937, according to Alvan Macauley, president.

New DeSoto Sedan-Limousine

Addition of a new sedan-limousine to the DeSoto line was announced this week by the DeSoto division of the Chrysler Corp. to fill special orders from retail customers. The new model has a wheelbase of 136 in., three inches longer than before, and is powered by a 100-hp. engine.

Metal Workers Fete Executives

Executives of nine-sheet metal plants in Detroit were honor guests this week at a "Good-Will" banquet given by their employes, members of Local 1511, Sheet Metal Workers' Union, CIO affiliate, in recognition of cordial and pleasant relations.

Letters

to AUTOMOTIVE INDUSTRIES

Fuel Consumption of Diesel and Hesselman Engines

Editor:

Will you allow me to comment on the article on "Fuel Consumption of Injection-Type Spark-Ignition Engines," which appeared on page 212 of your Journal for Feb. 12?

This article presents fuel consumption for this type of engine and concludes that these figures closely approach those obtained from Diesel engines in Nebraska tests. Fortunately, the writer limits his statement to Nebraska tests, but just the same the article is certainly misleading as to the real value of this type engine. For comparison, I am stating the guarantee figures (actual are lower) of two Diesel engines of about the same size: 4¼ in. by 6 in. and 5½ in. by 7½ in., both running at 1200 r.p.m.

	Spark-Ignition	Allis-Chalmers or Hesselman	Fair-banks-Morse Diesel
Full load	.566 lb./hp-hr	23.0% more	.46 lb.
75% "	.61	22.0% "	.50 "
50% "	.75	34.0% "	.56 "
25% "	1.10	30.0% "	.85 "

The writer feels that in all fairness to the Diesel engine above figures should be published with reference to said article.

H. SCHRECK.

New Labor Move Afoot at Akron

Birth of "Employes Protective Associations" at Goodyear and Firestone Seen as Significant Swing Away from the CIO

The Akron tire industry has given birth in recent weeks to new labor groups, rivaling the CIO, which are known as "Employes Protective Associations." Two such associations have been formed in the plants of the Goodyear Tire & Rubber Co. and the Firestone Tire & Rubber Co., and a similar group is in prospect at the B. F. Goodrich Co.

While other independent groups have been undertaken in the past, certain fundamental changes that have taken place in the Akron labor situation give the new groups new significance. The Goodyear and Firestone groups have adopted constitutions and are reported to have sizable memberships among the older and loyal employes who have not been in sympathy with the United Rubber Workers Union of the CIO.

Of significance is the fact that the strength of the CIO unions has been substantially weakened by heavy layoffs within the past six months. These layoffs put the CIO on the defensive—exactly the reverse of the situation that existed in 1936 and early 1937 when the CIO was on the offensive and when Akron tire plants were being plagued by almost daily sitdowns and by long drawn out strikes.

The "silent majority" of older employes who held their peace when it wasn't perhaps wise to talk against the CIO, appear to be coming out of their shells and are becoming articulate. In many cases, it is said, they are motivated by the fact that they are being forced to share the work down to a point where they scarcely can make a living wage. These employes, alarmed at the steady decentralization program of Akron manufacturers and the removal of tire production from Akron, are supporting the new independent groups as a means of protecting their jobs and bringing production back to Akron. A majority of them, it is understood, are in sympathy with the plan for reinstatement of the 8-hour day and are eager for its return.

Many men aligning with the new groups were stampeded into the CIO, for in 1936 and early 1937 many tire builders charged they were coerced into joining the union against their own free wills.

Dues of the new unions are only 25 cents a month as compared with the $1 of the URWA. In that respect the new groups are "price cutters" but they have the argument effective in some circles—that "all your money stays at home."

In these days of pay envelopes of $12.10, $15.80 and even as little as $3.55 a week, that difference of 75 cents means something.

Both the Firestone Employes Protective Association and the Goodyear Akron Employes Association profess themselves to be entirely independent of each other and of all other organizations and to be solely for the mutual interests of workers of the respective plants.

Significantly, each stresses the aim of "restoring good will between employer and employe."

In both groups, the leaders are members of the "company unions" which existed prior to the Supreme Court's validation of the Wagner law.

Presumably, the newer workers who have been the first to be laid off

are more likely to be union men, while the older employes still on the payroll, by and large, will include most of the men and women who never joined a union.

Firestone is the only major tire company with a CIO contract. It was signed last April to end the six-weeks' Firestone strike. It does not give the CIO sole or collective bargaining rights, granting the CIO the right to represent only those employes who elect to have it represent them in negotiations with the company.

With this contract soon to come up for renewal consideration, the formation of the Firestone Employes Protective Association is doubly significant, and its strength appears to be impressive. It is expected that the CIO will concentrate its resources in Akron to resist the new groups, but unquestionably the CIO has lost many members through layoff of men who have moved away from the city, and through loss of men who have been able to stick to their jobs and who are swinging to the new movement.

Tractors and Parts Exports to United Kingdom Up 66.5%

The Commerce Department's Bureau of Foreign and Domestic Commerce reported last week that while the value of tractors and parts exported to the United Kingdom increased from $2,431,000 in 1936 to $4,047,000 in 1937 (a gain of roughly 66.5 per cent), the value of automobiles, parts and accessories exported increased by only $328,000 from $12,225,000 in 1936 to $12,553,000 in 1937.

Motor trucks and buses increased from 2327 units valued at $1,219,000 in 1936 to 3523 units valued at $1,812,000 in 1937; exportation of passenger cars declined by 908 units valued at $429,000 in 1937, 7905 cars valued at $5,745,000 being shipped to Great Britain in that year.

Value of aircraft, including engines and parts, the department said, increased to $1,730,000 in 1937 as compared with $461,000 in 1936. Exports of items described as "other machinery and vehicles" amounted to $18,392,000 in 1937, an increase of $6,971,000 over the value of 1936 exports.

... slants

NO MORE OIL—*Those gloomy prophets who reappear periodically to point out that the nation's oil supply is fast dwindling to early extinction should be discouraged from further prognostications by the most recent estimate of the American Petroleum Institute's Committee on Petroleum Reserves which places our oil reserves at more than* 15,500,000,000 *barrels.*

This estimate takes into consideration only the proven areas. It is based upon present production methods. No consideration is taken of possible improved refining methods, or greater efficiency of consuming agencies in the future. In addition to resources of liquid bituminous and other materials, the United States has immense resources of bituminous shale. It is also possible to make gasoline from soft coal of which there are huge deposits in this country.

LEASE LOCOMOTIVES—*On authorization of the Federal Court at Chicago, the Rock Island Railroad will rent* 10 *Diesel switching locomotives for seven years from the Electro-Motive Corp., LaGrange subsidiary of General Motors, at an approximate cost of* $716,000 *for the term plus* 4 *per cent interest.*

Design New Spark Plug

Doran Ignition Corp. Development Departure From Conventional Type

A new type of spark plug of quite original design is being manufactured by the Doran Ignition Corp., Providence, R. I. A view of the plug is shown herewith.

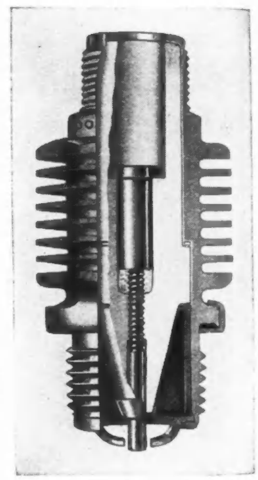
The insulator, which is made of steatite, is completely enclosed within the shell, and the terminal is located in a well formed in the outer end of the insulator, in order to provide the required safety distance against flash-over. By thus enclosing the insulator within the shell, it is protected against mechanical injury, and no condensation can form on its outside. The cable is inserted into the well, and a gland nut with rubber gasket holds it in place securely and prevents moisture from getting into the well. With this construction there is no exposed terminal on the plug.

The insulator is bonded to the shell over its entire surface with ceramic sealing cement, to prevent gas leakage and to improve the heat flow from the insulator to the shell. Thin fins on the shell dissipate the heat absorbed by the latter. It is claimed that the spark plug is so well cooled that its tip does not overheat even in the most severe service.

To prevent fouling of the inner end of the insulator, the plug is provided with a chamber of large size. The claim is made for this plug that, since the provisions for cooling the plug and for preventing fouling are quite distinct, one plug satisfactorily meets all operating conditions, and a dealer needs to stock only three models, one with each of the three standard threads, to service any kind of engine.

An interesting feature of the design is the provision made to protect the inner end of the insulator against breakage. This consists of a cap, integral with the center electrode, which fits over the tip of the insulator and is sealed to it.

Another innovation in the design is in the method of sealing the in-



Cut-away view of the new type Doran Ignition Corp. sparkplug

sulator into the shell. The whole shell is made as a single piece, with an internal shoulder which furnishes a substantial support for the insulator. The insulator is inserted into the shell from the lower end thereof, and is held in place against the shoulder therein by a bronze sleeve, which itself is held in place by having the lower edge of the shell turned over it. Various advantages are claimed for the use of this bronze sleeve. Besides holding the insulator in place, it improves the cooling of the latter by facilitating the flow of heat to the water jacket; it presents a smooth surface to the burning gases, which is said to tend to prevent carbon and lead deposits, and it tends to prevent leakage due to unequal expansion of the insulator and the steel shell.

In a conventional plug, owing to

the greater coefficient of heat expansion of the steel shell as compared with that of the insulator, the insulator has a tendency to come loose in the shell at high temperatures. Bronze has a higher coefficient of heat expansion than steel, and it is stated that by properly proportioning the lengths of the insulator hub and the bronze sleeve, it is possible to completely eliminate this differential expansion. In fact, the claim is made for the plug that gas leakage through it is zero, even at the highest temperatures.

Doran plugs are being made in the three standard thread sizes, viz., 7/8-in., 18-mm., and 14-mm.

Production

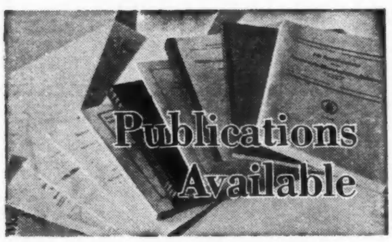
(Continued from page 299)

sales of used cars. In a number of instances they have seen an accompanying improvement in new car sales, while in other instances the improved movement of used cars has not yet affected orders for new cars.

W. S. Knudsen, president of General Motors Corp., stated in Milwaukee during the past week, that the corporation hopes to step up production to four days a week next month for the 217,000 persons now employed in its plants.

Dodge reports that orders for passenger cars during the first three weeks in February were 84.8 per cent greater than the same period in January, while orders for commercial cars and trucks were 47.1 per cent greater.

Pontiac reports that new car sales during the first 10 days of February were 300 units greater than in January, and Nash for the same period reported a 20 per cent increase in sales. Hudson for the second week of February reports retail sales that were 50 per cent greater than the same week in January.



A chart which specifies types of **safety goggles** to wear for protection against eye hazards in all principal industries has just been completed by the Safety Engineering division of American Optical Co., Southbridge, Mass.*

The Brown Instrument Co., Philadelphia, Pa., has published a new catalog, No. 6502, covering its complete line of **recording and controlling hair hygrometers.** Both electrically operated and air-operated humidity controllers (psychrometer type) are described.*

A list of inspected **fire protection appliances** revised up to January, 1938, has been published by the Underwriters' Laboratories, Inc.

Catalog No. 68 recently issued by Stephens-Adamson Mfg. Co., Aurora, Ill., contains detailed descriptions of the company's line of **variable reducer transmissions.***

Descriptive details on the new series of Fairbanks, Morse & Co. four-cycle, vertical, **convertible Diesel and gas engines,** designated model 36-A-8, will be found in bulletin 3600-A-3 recently published by Fairbanks, Morse & Co., Chicago.*

The Independent Air Filter Co., Inc., Chicago, has brought out a new bulletin, No. K-120, describing its line of "Kompak" model C **air filters** for industrial plant and office building applications.*

Lindberg Engineering Co., Chicago, has issued a bulletin, No. 81, illustrating its new **high temperature furnaces** equipped with "Tubulaire Elements."*

A new bulletin on Niagara series SL **power squaring shears** has just been brought out by the Niagara Machine & Tool Works, Buffalo, N. Y.*

The American Screw Co., Providence, R. I., has prepared a bulletin illustrating applications for its line of **screws** with the patented Phillips recessed head.*

* Obtainable from editorial department, AUTOMOTIVE INDUSTRIES. Address Chestnut and 56th Sts., Philadelphia.

Business in Brief

Written by the Guaranty Trust Co., New York

There was no apparent brightening in the general business outlook last week, and what uncertainty had already existed was intensified by the latest disturbing international incident in respect to Germany and Austria. Leaders in business and industry are showing a tendency to proceed with caution until the political developments in Europe become clarified. Business activity registered the third successive decline last week. The index compiled by the *Journal of Commerce* stood at 68.3, as compared with 69.1 the week before and 97.9 for the corresponding period last year.

Commodity markets were buoyant last week, mostly as a result of the President's statements in respect to higher prices. The President recently outlined a broad program of balanced prices at a generally higher level, easy money, and higher wages. He said that his goal has not changed since taking office in 1933, namely, a price system that will encourage expanded production, increase in the national income, and stimulate employment.

Railway freight loadings during the week ended Feb. 12, totaled 542,991 cars, which marks a decline of 21,749 cars below those in the preceding week, a decrease of 145,532 cars below those a year ago, and a fall of 88,104 cars below those two years ago.

According to the Bureau of Labor Statistics, retail food costs during the month ended Jan. 18 declined 2.8 per cent.

The volume of department store sales during January declined by slightly less than the usual seasonal amount, according to the Board of Governors of the Federal Reserve System. The adjusted index stood at 90, based on the 1923-25 average as 100, as compared with 89 for December and 91 for November.

Professor Fisher's index of wholesale commodity prices for the week ended Feb. 19 stood at 82.4, the same as the week before, as compared with 82.6 two weeks before.

The consolidated statement of the Federal Reserve banks for the week ended Feb. 16 showed a decline of $1,000,000 in holdings of discounted bills. Bills bought in the open market and Government securities remained unchanged. Money in circulation declined $4,000,000, while the monetary gold stock increased $25,000,000.

Estimate Firestone Estate At $50,000,000

A three-paragraph will bequeathing the vast estate of the late Harvey S. Firestone to the Cleveland Trust Co. for distribution under terms of a secret trust agreement, has been filed in the probate court in Akron. Mr. Firestone died Feb. 7 at his winter home in Miami Beach, Fla. The will names E. B. Roberts, trust officer of the Cleveland Trust Co., as executor.

Mr. Firestone, founder and chairman of the Firestone Tire & Rubber Co., is believed to have left an estate in excess of $50,000,000. He is survived by his widow, one daughter and five sons, all of the latter being officially connected with the Firestone company.

"To Emphasize Motion . . ."

Detailed Story of Automobile Body Development at Graham-Paige Told to SAE Group by W. H. Neely, Chief Design Engineer

"Design and Construction Problems of the Development of the Modern Automobile Body" was the title of a paper presented at the Feb. 21 meeting of the S.A.E. Detroit Section, the author being W. H. Neely, chief design engineer for Graham-Paige. Mr. Neely expressed the view that talking on this topic to engineers and designers was much like carrying coal to Newcastle, but he coupled with it the hope that the Graham organization had arrived at its destination by a detour or two that could be followed by others in attacking their problems.

After paying tribute to the late Amos Northup as having started the design, and to Leonard Keller, who aided in completing the work, Neely told how the chassis, body and design engineers at Graham first analyzed every available piece of information that would help in planning their program.

"Advertising-agency surveys, customer contacts, service records, National Safety Council reports, cost analyses, new developments and devices available through suppliers, and engineering recommendations were studied and digested," he said.

"From these we obtained a basis of fact upon which we could begin building. The advertising experts assured us that wheelbase and horsepower are among the important things that a prospect w e i g h s against price. Customer preference indicated that a car without a trunk would be seriously handicapped in the race for sales. Service records gave us a pointer as to what mechanical details should be stressed. Cost analysis established our budgets. And our supercharger experience gave us a key to the theme finally adopted.

"We wanted to create a car appearance that would suggest supercharger performance, at rest or in motion. This angle led to thoughts of line and mass distribution that would create the impression of action, motion and sleekness. Safety prompted thoughts of ample vision, convenience for passengers, width, lowness and many other features.

"To emphasize motion, we early realized the importance of having ample wheelbase, so in our early studies we slightly exaggerated length in anticipation of a compromise later.

"Even with this exaggerated wheelbase we soon concluded that the mass, consisting of body, hood, fenders and trunk, would require careful treatment to create the idea of motion because of the width we were holding. Another difficulty encountered was that the windshield angle appeared contrary to the lines that seemed to best suggest motion or action.

"However, once we assembled the various ideas, the whole scheme of things seemed to automatically unfold. One thing seemed to suggest the next. The mass treatment that suggested motion reached forward in front, and this opened the way to get added length with which to absorb our extra width. When we had emphasized forward speed in the main body portion, the windshield angle no longer looked contrary, but as it might be expected to look, bend-

ing backward at an angle.

"Thus the step-by-step solution of one problem seemed to help us solve the next one.

"As each idea appeared, both body and chassis engineers were quick to prove or disprove their practical application. What was first a mere spark of enthusiasm had by this time become a flame of endeavor.

"Our first real snag came with the fender contours. The conventional half-circle stopped motion and otherwise would not blend with the fender outline shapes. Finally we agreed upon a maximum over-all width and established tire bumping and turning clearances. This study disclosed the possibility of partially covering the tire, and letting this new clearance line sweep back into the fender. Thus balance was restored and motion regained. And as we had previously decided to apron the rear fender, this new line could be repeated there for consistency and still permit the removal of the rear wheel and tire with the use of a bumper-type jack.

"By this time all branches of the organization were in accord on the program, and chassis, body and design engineers combined their efforts to adapt these studies to the restrictions laid down, and in so doing to establish a common understanding for further development."

Mr. Neely showed slides of the various drawings, quarter-scale sculpture, full-size blackboard drawings, and scale wood models in their progressive stages to illustrate how compromises were effected to bring design and functional necessities together.

He showed how photographic studies of the models were used to check and recheck each detail with every department, and had comparative slides to show how closely the finished job followed the design as originally conceived.

"We believe that the step-by-step control exercised throughout the development, the engineering and tooling played a most important part in bringing this car to completion with little variation from what was originally established," said Neely.

In closing his talk, Neely touched upon the probabilities for important changes in the future, such as rear-mounted engines, and indicated that engineers would have to give serious consideration to the many advantages this type of construction affords. He said that objections to radical changes are being rapidly overcome by current developments, and mentioned the reduction in weight per horsepower as an example.

Pontiac Reports New and Used Car Sales on Upgrade

"Sales of new Pontiacs and used cars by Pontiac dealers throughout the United States during the first 10 days of February were more encouraging than they have been at any time since the current recession began last November," according to H. J. Klingler, general manager of Pontiac Motors.

"The trend seems to be definitely on the upgrade and has been continuing that way since shortly after the first of the year," he said.

"Although new car sales still are unseasonably low, they exceeded the first 10 days of January by more than 300 units. But it is the improvement in the condition of used car sales and inventories that shows the greatest gain.

"In the first 10 days of February 8602 used cars were sold by Pontiac dealers, which is 1675 more than were sold during the same period of January. Stocks of used cars have declined steadily since Jan. 1.

Books

of automotive interest

KRAFTFAHRTECHNISCHE FORSCHUNGSARBEITEN 10 *(Automotive Research Reports, No. 10). Published by VDI Verlag, Berlin NW 7, Germany.*

This tenth issue of the automotive research reports contains three reports, as follows: Brake Tests on Motor Vehicles, by P. Langer, H. J. Baum, H. Faust and H. Hahn; Mode of Action of the Four-Wheel (All-Wheel) Brake, by J. Jacklitsch, and Mass Balancing and Kinematics of a Four-Cylinder U-Engine, by F. Gauss. The reports are in German.

The first report deals mainly with tests made with decelerometers and discusses their use in determining the mean deceleration of a vehicle while braking. Among the results of the tests recorded are the reaction time, and the time of brake application. These results are plotted in the form of frequency curves.

The second report, on four-wheel braking, covers a theoretical investigation of the forces and moments at play when brakes are applied to all four wheels of a vehicle. It includes a chart for determining the minimum stopping distance. The third paper relates to balancing of a four-cylinder U-engine, that is, an engine in which two parallel cylinders have a common combustion chamber, the piston in one cylinder being connected directly to the crankpin by a connecting rod in the form of a bellcrank, while the piston in the other cylinder is connected by a conventional connecting rod to the short arm of the bellcrank. As the engine has four cylinders it is provided with a two-throw crankshaft, the two throws being spaced 180 deg. apart. Engines of this type usually operate on the two-stroke cycle and have the advantage that inlet ports in one cylinder can be both opened and closed after the exhaust port in the other cylinder.

The author finds that there is both a longitudinal and a transverse rocking couple. By using counterweights of adequate size, on the crank arms, the relation between these two rocking couples may be made anything desired, and either one or the other can be completely neutralized, but a complete elimination of all inertia forces is possible only by suitably arranged masses rotating at the proper speeds.

40 Years Ago

with the ancestors of AUTOMOTIVE INDUSTRIES

Automobile Club of Great Britain

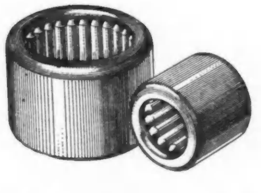
The Automobile Club of Great Britain, organized last December, has luxurious quarters at 4 Whitehall Court. . . . It is intended that the club shall aid the development of the new industry in every proper way.

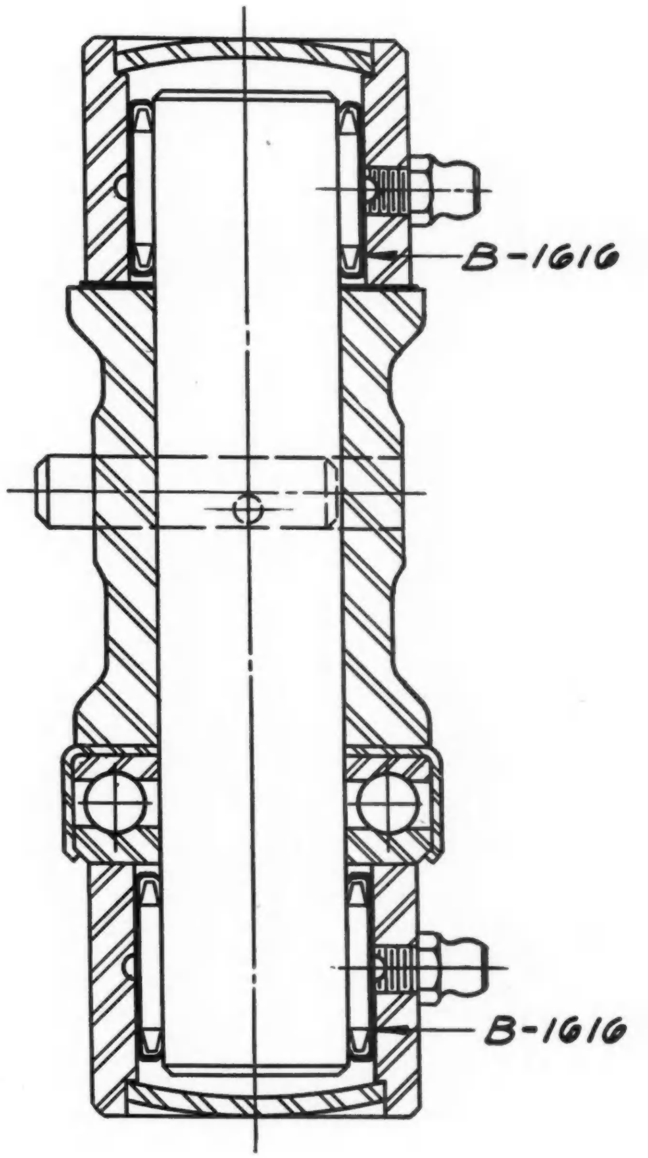
The rights of automobilism are to be guarded, and its progress advanced; and one of the social elements is the privilege to members of admitting their friends, ladies included during certain hours of the day. The leading spirit in the organization of the club was Frederick R. Simms, the well known consulting engineer, who was ably seconded by C. Harrington Moore, secretary of the club.

From *The Horseless Age,* April, 1898.

TORRINGTON NEEDLE BEARING

DESIGN AND SERVICE FEATURES





NUMBERS ARE TORRINGTON NEEDLE BEARING CATALOG NUMBERS FOR STANDARD TYPES AND SIZES

HIGH UNIT CAPACITY AN IMPORTANT ADVANTAGE

In King Pin Applications

High radial load capacity of the new Torrington Needle Bearing is an aid to economical design of such applications as the one illustrated here.

The bearing's full complement of small diameter needles gives ample radial capacity for heavy-duty commercial vehicles as well as for pleasure cars—making the design readily adaptable to different classes of service.

Strong, accurate construction of the Needle Bearing insures freedom from wear and maintains alignment of the shaft—a necessary factor in eliminating "shake" from front wheel assemblies. The bearing design—small diameter and long axial dimension—makes it possible to use an extremely simple housing construction, readily adapted to high speed production methods. Turned-in lips of the bearing retain an ample supply of lubricant for long periods of operation without service attention.

The Torrington Engineering Department offers to manufacturers the benefit of its long experience in bearing problems, and will be glad to cooperate in the lay-out of bearing applications. Further information is given in the Torrington Needle Bearing Catalog, available on request. Write for Catalog No. 7.

The Torrington Company
ESTABLISHED 1866
Torrington, Conn., U.S.A.
Makers of Ball and Needle Bearings
Branch Offices in all Principal Cities

TORRINGTON
NEEDLE BEARING

Woes of the Chief Engineers

Can No Longer Afford to be "Autocrats of the Drawing Office" Says Maurice Olley Who Reviews Their Problems

Woes of the chief engineers of the automobile industry were recently reviewed by Maurice Olley in an article which appeared in the *Journal of the Institution of Automobile Engineers* for February. No longer, says Mr. Olley, can these men afford to be "autocrats of the drawing-office," dispensing their own ideas of wisdom in design and manufacture in the face of all opposition. The voices of the suppliers clamoring at the door, drive all such notions out of their heads.

Mr. Olley points out that the task of making each year's car look as different as possible from last year's car is a constant worry. If last year's nose was aquiline and this year's nose is retroussé, there is the ever-present danger that the owner of last year's car, having inured himself to its appearance, may refuse to consider a retroussé nose and go off and buy another make of car. If so, the chief engineer is to blame. On the other hand, if he goes on turning out aquiline noses, he is obviously beginning to stagnate.

The chief engineer has also to serve as a battleground for the constant struggle to maintain quality and to reduce costs. No single manufacturing operation can be put into the car until it has been severely examined and every reasonable method sought of eliminating it.

At 8d. a pound for the finished product, no chief engineer's life can possibly be regarded as a happy one.

It must also be remembered that he has to live in at least four years at once. The assistant engineers in Detroit today have all forgotten 1938. They will get rid of 1939 by the end of March (or know the reason why), and their present real interest is in 1940.

But the chief has the teething troubles of 1938 in his lap, has to see that 1939 is out by March, and must prevent the boys going hog-wild in 1940. Also, offside, he is getting started on 1941.

The thing that prevents all chief engineers from going crazy is a bit of organization, which, I think, is peculiar to the American industry. This is the "sectionalizing" of the car under different junior engineers.

A dozen or so of such men are each presented with full responsibility for a section of the car: engine, transmission, axles, suspension, steering, chassis, tinware, cooling, accessories, electrical parts, etc. Each of them is encouraged to go out and learn all he can about his specialty from suppliers, from competitive cars, and from his own road tests.

More often than not, these junior engineers are the men who really start the new designs. Very few of these new designs begin life in the drawing-office. An engineer rigs them up roughly on one of his test cars first to see whether they will work. His idea is to get some workable results in the shortest time and in the simplest way possible. And the two things he is supposed not to do are to sit in an office chair or make lines on a drawing board.

AAA Releases Details on Code For Dirt Track Racing Cars

International Formula Motor Specifications to apply to all dirt track races for the year 1938, 1939,

1940, inclusive, which have been adopted by the Contest Board of the American Automobile Association, were recently released by the association.

All cars competing in dirt track events in 1938, 1939 and 1940 must comply with the following portion of the International Formula:

(a) Vehicles without supercharger: Minimum cylinder capacity 1000 cc. (61 cu. in.), must weigh at least 400 kg. (882 lb.); maximum cylinder capacity 4500 cc. (274 cu. in.), must weigh at least 850 kg. (1874 lb.).

(b) Vehicles with supercharger: Minimum cylinder capacity 666 cc. (40.64 cu. in.), must have a minimum weight of 400 kg. (882 lb.); maximum cylinder capacity 3000 cc. (183 cu. in.), must have minimum weight of 850 kg. (1874 lb.).

From the aforementioned, it results that for vehicles without supercharger, to all increases of 10 cc. (0.61 cu. in.) in cylinder capacity above 1 liter (61 cu. in.) there occurs a corresponding increase of about 1.285 kg. (2.83 lb.) in weight, and that for vehicles with superchargers, to all increases of 10 cc. (0.61 cu. in.) in cylinder capacity above 666 cc. (40.64 cu. in.) there occurs a corresponding increase of 1.928 kg. (4.25 lb.) in weight. Thus, all vehicles without supercharger between 1000 cc. (61 cu. in.) and 4500 cc. (274 cu. in.) and all vehicles with supercharger betwen 666 cc. (40.64 cu. in.) and 3000 cc. (183 cu. in.) are admitted within the limits of minimum weight indicated.

In the weight of the vehicles are included: the oil in the transmission chamber and the differential, and the tires used in the race. It does not include the water in the radiator, the oil carried for engine lubrication, the gasoline, the set of tools and the spare wheels.

The selection of fuel is entirely free.

NLRB vs. Zenite Metal

Board Charges That Corporation Discouraged CIO Efforts

An AFofL union organized along industrial lines and a rival CIO group, a UAWA union, established as a craft union and excluding certain classes of workers — positions which are just the reverse of principles fostered by their parent organization—have been uncovered as a result of action taken by the National Labor Relations Board against the Zenite Metal Corp., of Indianapolis, manufacturers of automobile stampings, moldings and grilles.

The NLRB directed the company to recognize the CIO's United Automobile Workers union as the exclusive collective bargaining group for workers and to void the closed shop contract with the AFofL's International Association of Machinists on the grounds that the company allegedly had helped the latter union to organize.

Board Member Edwin S. Smith conceded in a separate opinion that the AFofL unit, which he described as "a more comprehensive industrial unit," should be preferred to the rival union, the UAWA, since the CIO group excludes buffers, polishers and platers in its membership. But he concurred with his colleagues in the order which alleged that the AFofL union was given the assistance of the concern in a membership drive preceding the signing of the closed shop agreement last June.

The board charged that the com-

(Turn to page 319, please)

AUTOMOTIVE ABSTRACTS

Hydrogenation of Coal

In the annual report of the Department of Scientific and Industrial Research (Great Britain) for 1936-7 some reference is made to work done in regard to the hydrogenation of coal, the synthesis of hydrocarbons from carbon monoxide and hydrogen, and the production of lubricating oil by polymerization and similar processes.

Recent work of the Fuel Research Station has been directed to a study of the composition of various coals and their relative suitabilities for hydrogenation. Investigations carried out for this department by the Department of Colloid Science at Cambridge University has led to a better knowledge of catalysts, which in turn has made possible more exact control of the reactions, so that a greater proportion of the more volatile hydrocarbons can be obtained, and also a greater proportion of paraffins and a smaller proportion of aromatics. These developments suggest that it may be possible to obtain raw materials for the production of lubricating oil.

By mixing carbon monoxide and hydrogen and passing the mixture over catalysts at atmospheric pressure, liquid hydrocarbons can be obtained. This process avoids the high pressure of approximately 200 atmospheres used in the hydrogenating process. The hydrocarbons produced are paraffinic in nature, and thus should be suitable for the production of Diesel fuel as well as of lubricating oil. A plant that has been installed at the Fuel Research Station yields an output of about 10 quarts per day, which is sufficient for a study of the products.

The polymerization of olefines is being studied as a possible means of producing lubricating oil from coal. —*Report of the Dept. of Scient. and Industr. Research, 1936-7*, H.M. Stationery Office, London.

Calendar of Coming Events

Foreign Shows

Leipzig, Trade Fair, March 6 to 14, 1938

Conventions and Meetings

American Society for Testing Materials, Spring Regional Meeting, Rochester, N. Y. March 7, 1938

Machine and Tool Progress Show, Detroit.....March 9, 1938

SAE National Aeronautic Meeting, Washington, D. C. March 10-11, 1938

SAE National Passenger Car Meeting, Detroit, March 28-30, 1938

SAE National Tractor Meeting, Milwaukee, Wis..April 14-15,1938

Chamber of Commerce Meeting, Washington .....May 2 to 5, 1938

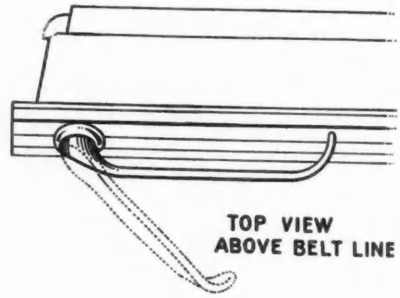
American Foundrymen's Association, Foundry Show, Cleveland ....May 14-19, 1938

Invents Safety Handle

Leon Ottinger Designs Door Lock To Turn On Inclined Shaft

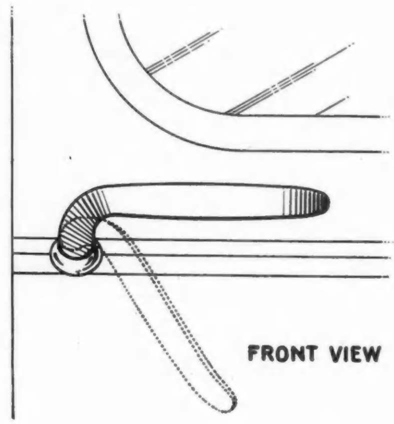
A door-lock construction comprising an inclined rotary lever handle has been patented by Leon Ottinger of 31 Nassau Street, New York. The object of the invention is to make it impossible for serious accidents to be caused to people outside the car by being struck by a projecting handle.

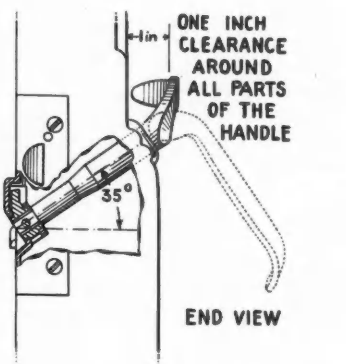
As may be seen from the sectional drawing reproduced herewith, the



handle pivots about an inclined axis, making it swing out and away from the body as it is depressed. With the lower portion of the car body extended farther out than the portion above the belt, a styling used considerably today, it is possible to locate the outermost projecting portion of the handle so that it will not extend more than about ¼ in. beyond the panel (as compared with 2 in. in many models now on the road). Unlatching and opening of the door with this handle is said to be a natural and continuous movement, in respect to which the new construction is said to be quite an improvement on certain current types.

The inventor points out that the same principle may also be applied to inside door handles. If the shaft is slightly inclined, the end of the handle may rest on or close to the upholstery,





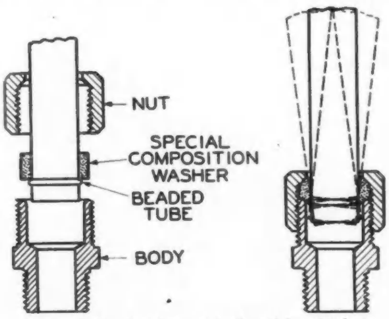
in which case it will not catch on the clothing of the occupants. As soon as the handle is turned, it moves away from the upholstery, and the gap formed between the tip of the handle and the upholstery by this motion may be made anything considered desirable, say from ¼ to ½ in.

Shockproof Flexible Fitting

A "shockproof" flexible fitting that is said to be particularly adapted to tube connection to oil filters installed on automotive vehicles separate from the engines, has been developed by the Imperial Brass Co., and sole selling rights have been assigned to DeLuxe Products Corp.,

LaPorte, Ind. It may be used with both steel and copper tubes.

Tubing with which this fitting is to be used have a bead formed on them near the end, by means of a special tool which is furnished by DeLuxe Products Corp. This bead holds in place a ring of synthetic (oil-proof) rubber which is stripped



Imperial shockproof flexible fitting

over the tube and is later compressed between the body and the cap of the fitting, as shown in the sectional assembly view.

It will be noticed that there is no metallic contact between the tube and the fitting, which permits of considerable angular motion of the tube in the fitting without affecting its oil-tightness. It is recommended that these shockproof fittings be used at both ends of the tubes leading from the engine to the filter. The tool for swedging the bead on the tubing comes with three dies which take care of three sizes of tubing, 1/4, 5/15 and 3/8 in.

NLRB vs. Zenite Metal

(Continued from page 315)

pany had entered into the contract in an effort to discourage a CIO membership drive and that the alleged aid given the AFofL unit had the effect of denying employes freedom to join the union of their choice. The AFofL group, according to the Labor Board, decided to broaden the scope of their organization and voted to admit production workers as well as toolmakers, machinists and specialists the day prior to signing agreement with the company.

The board said the company did not "seriously dispute" the alleged organizing activities but relied largely on the claim that supervisors were not instructed to take part in the IAM campaign. The board ruled, however, that the effect of supervisors' activities in the organization drive was identical to company sponsorship since employes "take their cue from those they assume are more closely connected with management." The board also conceded the company has offered to close down the plant to permit the UAWA to solicit members but added that the privilege was never exercised because the CIO union had substantially completed its organization drive.

Puerto Rico Reports Record Purchase of Automobiles

Puerto Rico's purchases of automobiles and trucks in 1937 were the largest in the history of the island's trade with the mainland, according to a report by the Puerto Rican Trade Council. A total of 4044 vehicles valued at $2,869,164 were bought during the year, an increase of about 9 per cent in number and 12 per cent in total value over the 1936 purchases.

The island, which buys all of its motor vehicles in the States, now has a registration of about 21,000, of which about 5000 are trucks. Most purchases during the year were in the lower price ranges.

With nearly $2,000,000 budgeted for new roads on the island, it is expected that the demand for automobiles will continue to increase.

Automotive Metal Markets

Steel Producers Operating at Loss With Only 30% Capacity Employed; Pick-Up in Consuming Demand Seen as Sole Remedy

With steel producers standing pat on second quarter prices (except for the downward change in the price of cold rolled sheets, which became effective on Feb. 9, and which has been reaffirmed), automotive consumers are continuing unchanged their policy of buying steel as they need it. There was a good deal of talk, before the leading producer announced continuance of present prices, that neither sellers nor buyers of steel wanted prices cut at this time, the former because high production costs made such a move virtually impossible at the present rate of demand and the latter because it would adversely affect the value of what steel reserves they had on hand. The latter are negligible in extent, that of finished parts awaiting assemblies being probably greater, but for all that not at all abnormally large.

None of these considerations entered as much into the decision of producers to make no price changes at this time, as did the obvious futility of such a move as a means of bringing about an overnight change from the present rate of steel buying to one that would permit mills to operate on a more profitable basis. The argument that lower prices would bring buyers into the market just didn't stand up when analyzed with the help of direct inquiries to large consumers, none of whom is interested in taking on steel just because the price may seem attractive.

Just as it was deemed best not to alter the steel market's price structure at this time, so there will be no change in the wage set-up, the independents and smaller producers falling into line with the action of the leading producer. All steel producers are operating at a loss with only 30 per cent of their capacity employed, but a pick-up in consuming demand is recognized to be the only remedy.

Pig iron producers, following the lead of the steel market, have reaffirmed prevailing prices for the second quarter, ignoring dips in the market for steel scrap. The extent to which they use scrap is optional with foundries.

The International Tin Committee, at a meeting held at The Hague, lowered the export quotas of tin-producing countries from 70 per cent of standard tonnages to 55 per cent. In round figures this means that, instead of 36,000 tons in the first quarter, shipments in the second quarter will be held down to 27,000 tons. While the immediate effect of the cut was to bring about a $10 per ton advance, later developments cancelled most of this gain. The market for spot Straits here at the close of business on Monday was at 41.87 cents with the tone barely steady. Apparently tin buyers interpret the cut in export quotas as nothing more than an adjustment of the supply to the demand in sight. Should this unexpectedly increase in the next few months, suitable readjustment by the committee would probably follow.

Somewhat of a firmer tone prevails in the copper market, due to heavy buying by Europeans. The export price on Monday stood at 10.15

(Turn to page 322, please)

LITTELL FEEDS FOR FASTER SPEEDS

At left—No. 6-58 Single Hydraulic Drive Feeding Machine with Measuring Device, feeding material .043" thick by 54" wide, 30" to 125" per stroke of press, shown with Cradle Reel.

• • •

Equipped with a seven-roll power-driven straightener.

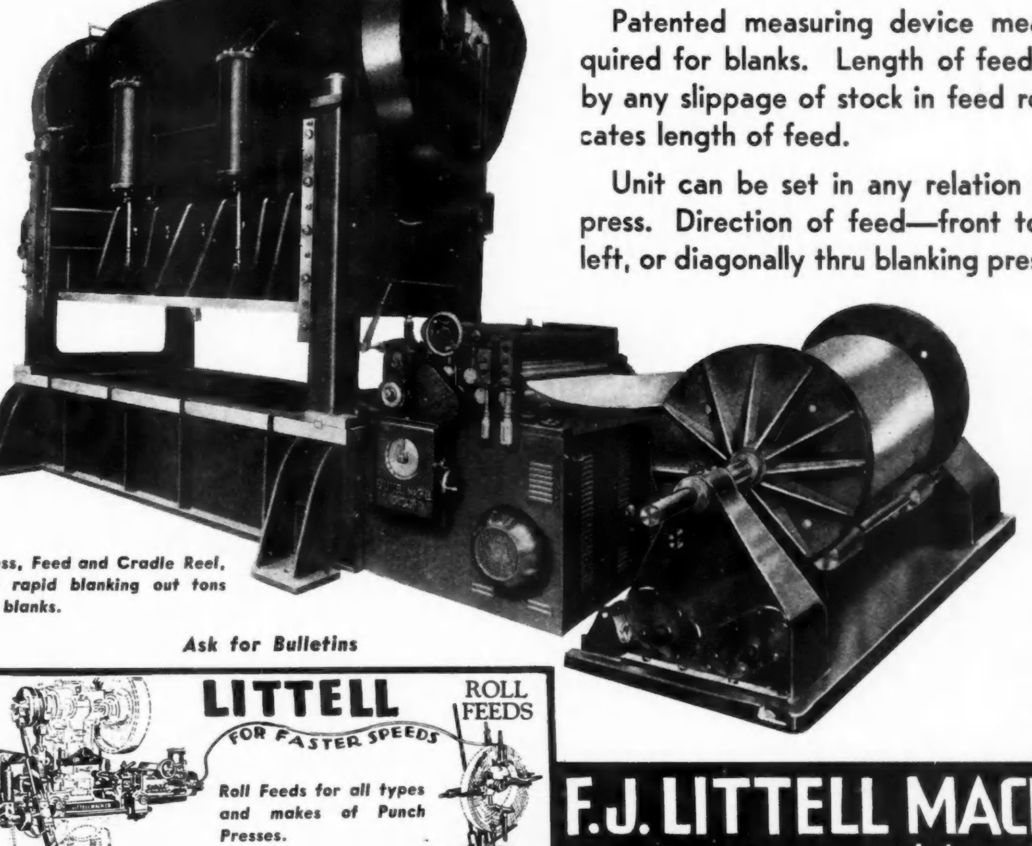
• • •

Motor-driven thru a variable hydraulic unit.

INCREASED production plus savings in price of material, handling costs and scrap loss, soon pays for above unit. Adaptable to blanking of large work such as fenders, running boards, hoods, oil pans, doors and other large stampings.

Patented measuring device measures stock required for blanks. Length of feed is not affected by any slippage of stock in feed rolls. A dial indicates length of feed.

Unit can be set in any relation to your present press. Direction of feed—front to back, right to left, or diagonally thru blanking press.



Press, Feed and Cradle Reel, for rapid blanking out tons of blanks.

Feed arranged for single trip, automatic run of feed, and for feeding stock forward or reverse. Press, Feed and Cradle can be arranged with centralized automatic push button control.

■ ■

Other Littell Products—Roll Feeds, Dial Feeds, Magazine Feeds, Hopper Feeds, Air Valves for Punch Presses — Reels for Coiled Stock.

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FOR FASTER SPEEDS

Roll Feeds for all types and makes of Punch Presses.

F. J. LITTELL MACHINE CO.

4155 Ravenswood Ave., CHICAGO, ILL.

Metal Markets

(Continued from page 320)

cents, compared with 9.65 cents a week ago. The possibility of inflation and war clouds served the London bull element as argument for higher prices, but consumers here refused to get excited, most of them still having considerable copper stocks on hand and others preferring to await a general rise in industrial activity before entering fresh commitments. The market here remained unchanged at 10 cents, with little change in the pace of domestic buying.

Both zinc and lead show a somewhat firmer undertone. In fact, some zinc producers are reluctant to commit themselves for deferred deliveries at prevailing quotations.—W. C. H.

Four Cylinders Optional In English Ford Trucks

Toward the end of last year Ford in England introduced an optional four-cylinder engine for the Fordson 3-ton truck chassis and the favor it has secured from prospective buyers in this field is leading to the option being extended to other models. It is already available in the 2-ton forward control 118-in. wheelbase chassis and will soon be so in the 2-ton and 3-ton 157-in. wheelbase chassis with normal control position.

While the V-8 30 hp. engine is said to be preferred for long-distance high-speed service and for haulage where conditions are severe, some operators — particularly those specializing in local deliveries and haulage—prefer the four-cylinder engine. The latter is rated at 24 hp., or somewhat less than the engine of the Fordson tractor.

Road Hazard Tire Guaranty Held Illegal in Texas

The State of Texas has joined other States which have ruled the road hazard tire guaranty illegal, according to George J. Burger, secretary-manager of the National Association of Independent Tire Dealers. The Texas attorney general is notifying all Texas tire distributors that to continue use of the road hazard tire guaranty, they must apply for insurance licenses. Ohio, Arizona, Arkansas, Kentucky, South Carolina and Georgia have taken similar action, and Attorney General H. S. Duffy of Ohio, has already filed suit in the State Supreme Court against Western Auto Supply Co., charging violation of the State insurance laws through use of the road hazard warranty.

Recently leading tire manufacturers adopted a standard and uniform lifetime tire guarantee in an effort to have the road hazard guaranty completely discarded. A few small tire manufacturers and several mass distributors have, however, continued use of the road hazard warranty.

S. L. Davis to Head Chicago Auto Show

Following a meeting of the board of directors, H. T. Hollingshead, president of the Chicago Automobile Trade Association and of Nash Sales, Inc., announced the appointment of S. L. Davis as chairman of the committee that will have charge of Chicago's 39th annual automobile show to be held Nov. 12 to 19 at the International Amphitheater.

Davis, who heads the Hupmobile Illinois Co. and is a director of the Hupp Motor Car Corp., is also on the board of the Chicago trade association.

TOOLS OF TOMORROW

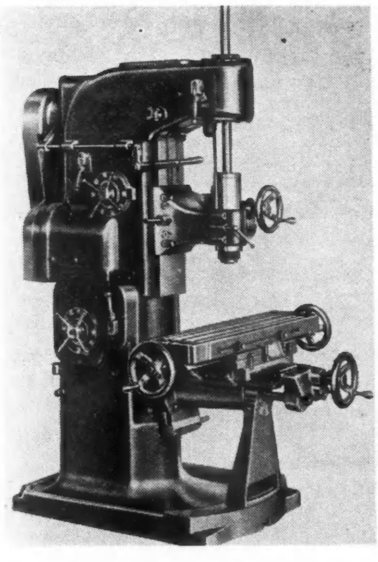
Vertical Milling

. . . New Knight machine has 16 spindle speeds in geometrical progression from 80 to 1600 r.p.m.

W. B. Knight Machinery Co., St. Louis, Mo., has brought out a new universal vertical milling machine, designated as the No. 30.

On this equipment the forged chrome nickel steel spindle is driven by hardened ground and lapped spiral bevel gears. Heat treated alloy steel change gears are mounted on anti-friction bearings and run in oil. The table unit is of the semi-bed type, being rigidly supported at the outer end of the knee, as well as at the column. The saddle is 20 in. long and 14 in. wide.

The spindle sleeve or quill is $4\frac{5}{8}$ in. in diameter with a 6-in. closely fitted bearing in the spindle head



Knight No. 30 Vertical Milling Machine

which in turn has a 12-in. by 8-in. wide accurately scraped fit to the face of the machine.

Some of the additional features of the machine include: Short V-belt drive to the twin disc clutch; quick operating and easy reading dials for selecting speeds and feeds; table tilts to either side of horizontal for angle milling; table unit swivels around column increasing both longitudinal and throat range; all vertical adjustments are obtained by moving the counterbalanced spindle and spindle head rather than a heavy table unit; positive and automatic throwouts for spindle feed in either direction; all tool changes made at spindle nose.

As pointed out by the manufacturer, the tilting table which also swivels around the column eliminates many special fixtures and cutters, and makes possible machining at different angles with only one setting of the work.

There are 16 spindle speeds in geometrical progression from 80 to 1600 r.p.m. Some of the other specifications are as follows: Table travel, longitudinal power feed, 25 in.; table travel, transverse power feed, 12 in.; overall size of table, 10 in. by 42 in.; working surface of table, 10 in. by 42 in.; number of table feeds, 16 in.; range of table feeds,

½ to 12¾ in.; number of vertical spindle feeds, 4; range of vertical spindle feeds, 0.002 in. to 0.010 in.; amount of power vertical spindle feed, 6 in.

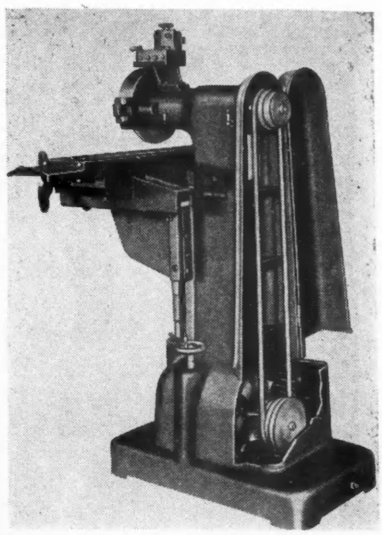
Surface Grinder

. . . Covel adds hand feed machine with three spindle speeds and fully enclosed motor

Latest addition of the line of precision grinders built by the Covel Manufacturing Co., Benton Harbor, Mich., is the No. 15 hand feed surface grinder.

The main frame of the new machine which is shown here is cast in one piece with three heavy ribs in the vertical section. The spindle, mounted in preloaded ball bearings, is driven by a three-speed V-belt drive from a motor mounted inside the base.

The box-section knee is mounted on the main column by means of vertical dove-tailed ways with gibs,



Covel hand feed surface grinder

and the knee is raised and lowered with a handwheel.

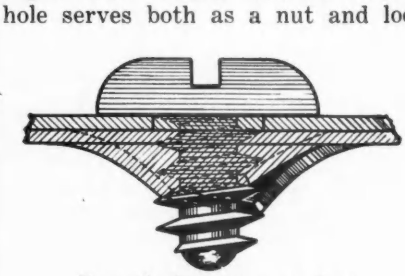
Some of the specifications of the machine are as follows: Working surface of table, 6 in. by 18 in.; longitudinal travel of table, 19½ in.; transverse travel, 7½ in.; vertical travel, 11 in.; capacity under 10-in. grinding wheel, 10 in.; grinding wheel, 10 in. by ¾ in. by 2½ in.; grinding spindle length, 22 17/32 in.; diameter 2 7/16 in.; and spindle speeds, 1900, 2350, and 2900 r.p.m.

Screw Fastening

. . . Device designed to replace conventional types such as clinch nuts, cage nuts, and tapping plates

According to Prestole Devices, Inc., Detroit, many automotive manufacturers during the past year have adopted one or more applications of the Prestole method of fastening.

The Prestole method as applied to sheet metal assemblies consists in preparing the sheet metal for the reception of a special screw fastening in such manner that the formed hole serves both as a nut and lock



Prestole fastening method

washer. In effect the metal is thrown up in the form of a cone with an ever changing curvature. The perforation is considerably smaller than the root diameter of the screw so

(Turn to page 328, please)

Production Lines

Latest Wrinkles

Among other things, the Detroit Diesel Engine plant of GM strikes the note of modernity in the use of the flexible "bus-duct" system of power distribution. Not only is this the most efficient method for power distribution, but it permits the utmost of flexibility in machine arrangement and shifting. For materials handling they use overhead trolleys with hand-operated hoists, serving all machine lines.

Social Progress

By all means take time out to read one of the best sellers of the year in non-fiction, "Mathematics for the Million," by Lancelot Hogben, F.R.S. Primarily mathematics has been humanized by giving the "reasons" for fundamental concepts and operations. But far and beyond this, the virtue of the book lies in rationalizing the various forms of mathematical expression with the period or periods of social development in which they occurred. This historical and human basis will be of interest to those who use mathematics as an everyday tool. The book is published by W. W. Norton & Co.

Ups Life

Maybe this isn't news, but we gather that a number of big plants are using a high-speed case treatment on tool steels, claimed to increase tool life from 30 to 100 per cent. The figures come from a prominent plant metallurgist and not from a tool salesman. In one of the large motor plants the high-speed case treatment follows the normal tempering treatment on high-speed-steel tools; variations of this procedure may be found in other establishments.

On Decentralization

One of the old-line manufacturers whose facilities comprise a number of varied lines has just begun an experimental program of decentralization of engineering and management activities. In this program, the plant has been divided into its rational components and each division will have its own engineering, production, planning, and purchasing responsibilities and personnel. Contrary to first impressions, the inauguration of the project resulted in a tangible decrease in personnel and overhead burden. Final results should be of interest to all plant management.

Engine Mounts

Some time during the next thirty or sixty days look for a startling announcement concerning flexible engine mountings. We have it on good authority that a basic principle covered by patent is on the way and will break about that time. Sorry we can't say more about it now.

Pneumatic Cushion

Our most reliable scout tells us that one of the prominent names in rubber has acquired the process for making a unique kind of seat cushion. We don't know the whole story, but evidently the process combines the features of a pneumatic cushion with some means of circulating the air so as to promote cooling. The process is being groomed for producing passenger car, truck, and bus seats and backs.

Moot Point

Exclusion of Diesel powered trucks from the new Lincoln Tunnel in New York poses a neat question. In the first place, the restriction implies that most, if not all, of the Diesel equipment on the road has objectionable exhaust. Our own experience indicates that some Diesel equipment is, indeed, offensive in this respect. But is it fair to say that all Diesel equipment can be thus stigmatized? It might be fairer to an infant industry and more in the public interest to penalize only those who offend and force them to correct the exhaust, as they should in any event.

Plastic Finish

Doehler Die Casting Co. is quite excited over the possibilities of a new process of coating automobile hardware with plastic. The coating is applied by dipping and is rather less expensive than chromium plate. It is heavy, durable, and mechanically almost indestructible. Some idea of the range of the process may be gained from the fact that they can use practically any type of plastic now on the market, including the transparent finishes. One of the most handsome finishes for interior hardware is a neutral shade plastic with metallic powder interspersed in the mixture. The plastic can be applied on any material and is not confined to a die casting.

Factory Standards

Contact with many of the important fleet operators intimates a strong interest in factory-inspired standards for maintenance and salvage operations. Something that the heavy-duty truck operators have lacked for many years, such factory standards would do much to win the favor of the best customers of the motor truck producer.—J. G.

TOOLS OF TOMORROW

(Continued from page 324)

that as pressure is exerted, the metal seeks its original plane and in so doing clamps around the shank of the screw.

In places where the Prestole method has been applied, it is said to replace conventional fastenings such as clinch nuts, cage nuts, tapping plates, etc. Among automotive applications are the following: Floor pan parts, dash panels, foot rest tapping plates, radiator grille assemblies, visor retainer plates, deck hinge tapping plates, and door handle tapping plates.

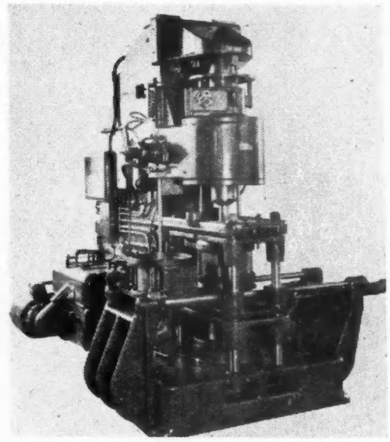
Internal Grinder

. . . Fitchburg builds new vertical planetary type

A new vertical planetary type internal grinder has been developed by the Fitchburg Grinding Machine Corp., Fitchburg, Mass. The machine was designed for grinding the holes of parts not easily handled and difficult to rotate.

The cycle is automatic from loading, work clamping, grinding, sizing, through to unloading. Control is electro-hydraulic throughout and the sequence of movements is interlocked so that one motion cannot operate unless the previous one has been performed.

The wheel head is equipped with anti-friction bearings in all three movements—the spindle bearings, the eccentric rotation, and the rotation of the complete assembly. Speed of the assembly rotation is controlled by a hydraulic oil motor with variable speeds. The eccentric has $1\frac{1}{2}$ in. movement on the radius allowing for 3 in. wheel wear on the diameter.



Fitchburg vertical planetary type internal grinder

A 3 hp., 3600 r.p.m. motor drives the wheel spindle and speed changes are taken care of by pick-off pulleys. Hydraulic control is all continued in one unit including the tank. In this, there are four oil circuits driven by two dual pumps with a 5 hp., 1800 r.p.m. motor. One circuit has a balancing control to act as a counterweight for the vertical reciprocation of the wheel head.

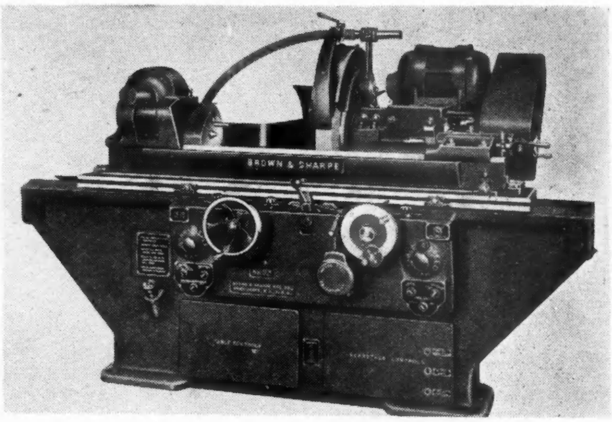
Grinding

. . . "20 series" Brown & Sharpe Machines operated entirely by electrical control

New "20 series" plain grinding machines now being marketed by the Brown & Sharpe Mfg. Co., Providence, R. I., are operated entirely by electrical control and are designed for cylindrical grinding of medium-large parts on a production basis.

A feature is that once one of these

machines has been set, it can be controlled entirely by the cross feed handwheel. Turning one selector switch provides this semi-automatic grinding cycle, whereby a slight rotation of the cross feed handwheel advances the wheel to the work and simultaneously starts the headstock, the table (except when set for plunge-cut grinding), cross feed, and coolant pump. When the work is "to size," the cross feed is automatically disengaged, and rotation of the handwheel to the starting position withdraws the wheel and stops the headstock, table and coolant pump.



Brown & Sharpe grinding machine for medium large parts

Two control knobs provide for manual operation. Turning the table knob starts and stops the table; and, when desired, pressing down the knob will cause the table to stop at the end of its path of travel. The headstock knob starts and stops the headstock and coolant pump together; and, by turning a selector switch, this knob can also be made to start and stop the table movement. Whenever it is desired to inspect the work being ground, depressing the headstock knob will stop the flow of coolant without affecting the headstock rotation; and the same control can be used to jog or rotate the headstock slightly in loading and removing work.

Other electrical features include table dwell (adjustable from 0 to $1\frac{1}{2}$ sec.); electrical braking and reversal of the table motor; individual motor drive for wheel spindle, headstock, table, oil pump and coolant pump; and simplification and safety of operation gained by interconnection of the control circuits.

The No. 20 machine is of 10 in. by 18 in. capacity with a maximum swing of $10\frac{3}{4}$ in. over the table. A 24-in. wheel clears work to 10-in. diameter and a 30-in. wheel to 6-in. diameter. The No. 22 is an identical machine, except that it has a longer bed and table and takes work to 36 in. between centers.

Headstock speeds range from 80 to 320 r.p.m. and rates of table travel are in two ranges, 15 in. to 60 in. per min., and 75 in. to 300 in. per min. In addition, extra-slow rates of table travel are provided of 7 in. and 11 in. per min.

The wheel spindle is driven by multiple V-belt from a motor mounted on the wheel slide, change sheaves giving rates of 825 and 1035 r.p.m.

Other mechanical features include adjustment of cross feed throwout (manual or automatic) to 0.0001 in.; use of scraped ways for table and

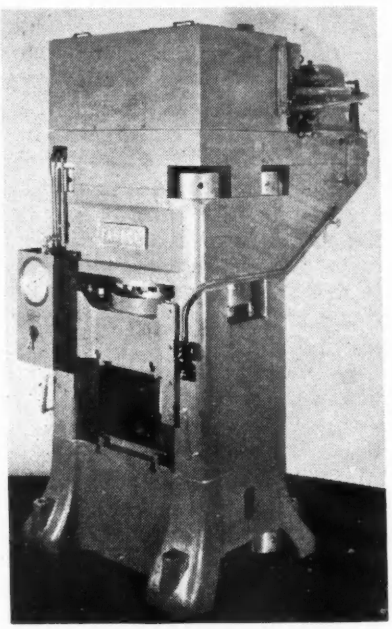
cross slide; rigid one-piece bed, with three-point support to preserve alignments; and automatic lubrication of wheel spindle, wheel slide ways, cross feed and table mechanisms and table ways by gravity flow of filtered oil supplied by a motor-driven pump.

Brake Block Molding Press

. . . Farrel-Birmingham builds unit with maximum capacity of 500 tons

A hydraulic press for molding automotive blocks was built recently by Farrel-Birmingham Co., Inc., Ansonia, Conn. It is a self-contained, individually powered type with motor-driven pump mounted on top of the machine. Maximum capacity is 500 tons with one down-acting 21-in. diameter ram and two $6\frac{1}{8}$-in. double-acting cylinders mounted in the top crosshead and working under an initial pressure of 2600 lb. per sq. in.

Maximum opening of the press is 24 in.; maximum stroke, 24 in. The platen area is 38 in. by 31 in. Both the bottom and moving crossheads are provided with T-slots for the attachment of molds. Adjustment of the moving crosshead guides is made possible by adjustable bronze gibs sliding against the finished interior surfaces of the press side frames.



Farrel - Birmingham hydraulic press for molding automotive brake blocks

Pressure regulation extends over a range of from 10 to 500 tons. By means of a selective pressure system, this range is infinitely variable from minimum to maximum. Any 10 pressures within the range may be set for immediate selection. On the "low" selection of pressures, $6\frac{1}{8}$-in. diameter double-acting rams are used alone, and develop a minimum pressure of 10 tons to a maximum of 75 tons. Above the 75-ton range, press pressures are developed by both the $6\frac{1}{8}$-in. rams and the 21-in. main ram, and may be varied by small increments up to the maximum of 500 tons.

Dwell of the selected pressure on the work may be automatically timed over a range of from 2 to 40 sec. by an automatic timing device.

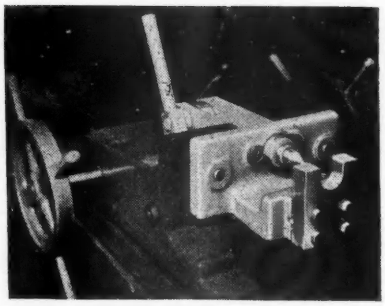
Work Holding Fixture

. . . Landis designs special attachment for use on Landmaco threading machine

A special holding fixture for use on the Landmaco threading machine and designed to provide an efficient and rapid method of accurately locating the work to assure perfect concentricity between the thread and the work was developed recently for one of the large automobile manufacturers by the Landis Machine Co., Inc., Waynesboro, Pa. *(See next page)*

The attachment consists of a special traveling center, not shown in the accompanying photograph, a driving block and a locking center. The traveling center is located in the bore of the head to support the front end of the work, and is said to eliminate possibility of the chasers leading off center. A long heavy spring, also in the bore of the die head, spindle, maintains a constant pressure of the center against the work.

The second center, located on the carriage directly back of a steel block which is cut out to conform to the shape of the work it is to hold, provides the remainder of the supporting, and also a locking action to the work. This center is supported in a short spindle, the opposite end of which operates against a cam. The cam is mounted on a shaft at right angles to the spindle. One end of the shaft is milled to a hexagon shape and is fitted with a short handle. If necessary to do so the handle may be quickly removed and relocated on the shaft in a convenient operating position.



Landis work holding fixture

When used in production, the work is first located on the traveling center, then dropped into the steel block on the carriage. The cam handle is then pushed forward causing the locking center to engage in the work and push it forward until a shoulder on the work rests against the back surface of the driving block.

Since the cam imparts a slow movement to the center spindle, a positive locking action is attained the instant the work strikes the driving block. Adjustment is provided in that part of the attachment located on the carriage, to permit both horizontal and vertical alignment of the locking center, to the center of rotation of the die head.

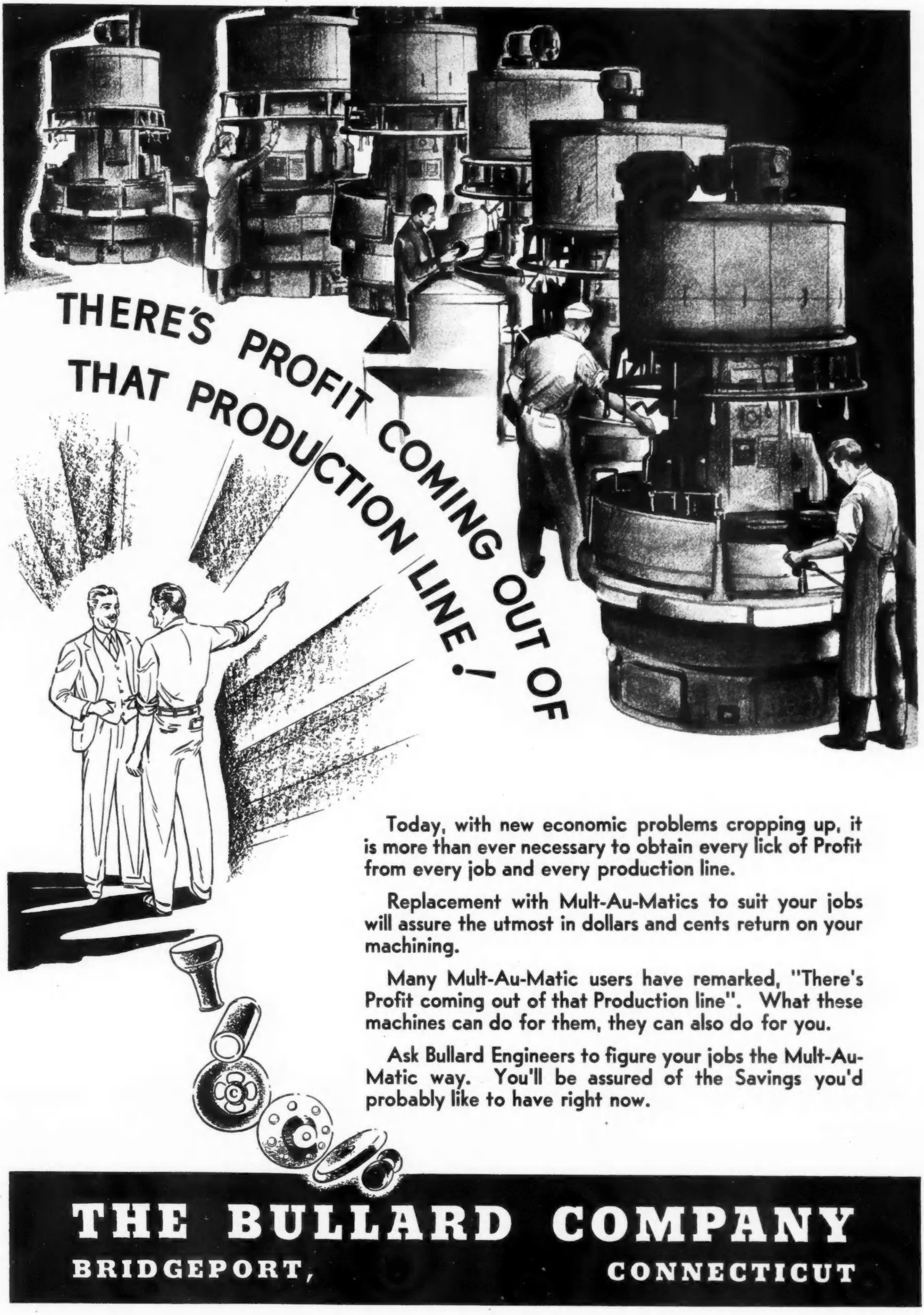
Billet Saw

. . . Handles aluminum, brass, and other non-ferrous alloys up to 9 in. diameter

A machine for sawing billets, tubes, and bars of aluminum, brass, and other non-ferrous alloys up to 9 in. diameter was recently developed by the Cochrane-Bly Co., Rochester, N. Y. It is driven through a double multiple disc clutch, and hardened alloy steel gears, hardened steel worm, and phosphor bronze worm gear, all running in oil. All drive shafts including the saw spindle are mounted in anti-friction roller bearings.

The machine has a sliding gear transmission giving four cutting speeds of approximately 250, 370, 485, and 600 ft. per min. A self-contained hydraulic unit provides hydraulic feeds from 0 to 100 in. per min. The machine operates a special blade 30-in. diameter, and will cut a 7-in. brass or aluminum billet in 5 sec.

ACCORDING to the Japanese Department of Commerce, shark oil is quite suitable for the lubrication of aircraft engines and can be used at temperatures down to minus 50 deg. Fahr. It is being used to quite an extent in Japanese military planes.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Noise Units Agreed Upon

IN an article in *Industrial Standardization*, the organ of the American Standards Association, Harvey Fletcher, director of Physical Research of the Bell Telephone Laboratories and chairman of the International Committee on Units and Methods of Noise Measurement, reports that international agreement on the reference sound and on the scale for measuring noise was reached at a meeting held in Paris on July 5, 1937, under the auspices of the International Standards Association. There has been considerable confusion with regard to these standards in the past, American publications always using the decibel, while European publications usually used a unit known as the phon. As a result of the agreement reached in Paris, at a meeting at which 14 different countries were represented by 40 delegates, hereafter the decibel will be the unit used for intensity-level measurements, while the phon will be used for loudness-level measurements.

Mr. Fletcher in his article briefly traced the development of noise measurement and noise units. Before noise can be measured at all, a unit must be chosen to express the physical intensity of a sound and the loudness with which a person's ear hears it. By 1929, the decibel had been adopted both in this country and in England as the unit for measuring the intensity level of a sound above the threshold of hearing. Since then this unit has been used very extensively in this country for defining the intensity level of a noise.

The values obtained by the early workers in the field differed, however, because they chose different values for the threshold, or reference, intensity. This difficulty was solved when the American Standards Association took up the problem and obtained agreement by engineers and physicists in America to use as the reference sound intensity a value of 10-16 watts per square centimeter and as the reference pressure 0.0002 dyne per square centimeter. This made it possible to express accurately the physical intensity of any type of sound in decibels above the recognized standard reference level. This intensity does not, however, correspond to the loudness of the sound as heard by the ear.

To obtain a quantitative measure of the loudness of a sound as distinguished from its physical intensity, the Bell Telephone Laboratories in 1927 proposed that the loudness be defined as numerically equal to the intensity in decibels above 10-16 watts per square centimeter of a 1000 cycle pure-tone which sounded equally loud. The intensity level of the 1000 cycle reference-tone was defined as the loudness level of this tone, and any other sound which is judged by listeners to be equally loud is said to have an equal value of the loudness level.

Other laboratories saw the advantages of this scale and began to use it. In 1932 it was adopted by a committee of the American Standards Association as a tentative American Standard. Several countries in Europe followed the lead of America in using a reference tone to measure loudness, but in some instances they chose one having a frequency of 800 cycles per second and in most cases they selected a zero which differed from that adopted by the American Standards Association. In Germany and in some of the smaller countries the word

"phon" was used instead of decibel for designating units on the loudness level scale. They also chose a reference level about 4 decibels higher than that of the American Standard. Great Britain joined them in using the word "phon," but chose as the reference zero 0.0002 dynes per square centimeter.

It was principally because of these differences that an acoustical conference on standardization of noise measurements was called. It was held under the sponsorship of the International Standards Association, but under this latter organization, members of the International Electrotechnical Association assumed the responsibility for units and methods of noise measurement, including noise meters. As already mentioned, agreement was reached concerning the fundamental standards for noise measurement and the following international standards were adopted.

The reference sound and the scale for sound level measurement are characterized as follows:

(1) The reference sound is to be produced by a plane, sinusoidal, traveling wave with a frequency of 1000 cycles per second;

(2) The reference sound shall correspond in round numbers either to an intensity of 10-16 watts per square centimeter or to an acoustical pressure of 2×10^{-4} baryes (dynes per square centimeter);

(3) In each case the intensity scale or the pressure scale is to be graduated in decibels with respect to the reference level.

The unit to be used for intensity-level measurements is the decibel, but the unit to be used for loudness-level measurements is the phon. Loudness measurements are to be made by listening to the reference sound and the sound to be measured, alternately, with both ears, while the intensity of the reference sound is regulated until an ordinary observer considers that it has the same loudness as the measured sound. Whenever possible, the reference sound and the one measured should be listened to for practically the same length of time. This period should never be less than one second when listening to the reference sound.

When under these conditions the intensity level or the pressure level for the reference sound (the pressure being that of the free wave before the operator's head is in the acoustical field) is "n" decibels above the reference zero, the sound measured is said to have a loudness level of n phons.

Primary loudness measurements are made in a very "dead" room or outdoors where there is no reflected sound. The intensity of the reference tone, which is generated with an oscillator and a loud speaker, is usually measured with a calibrated condenser microphone.

Italy Plans for Fuel Independence

LIKE one or two other European countries, Italy plans to make herself independent of foreign sources of motor fuel within the next few years, and some light was thrown on steps taken to this end on the occasion of the second national motor fuels show which was held in Milan in conjunction with the tenth annual automobile show in that city. It was pointed out that in 1937 about 24 per cent of the motor fuel consumed in Italy was from native sources. It included 1.2

per cent of petroleum from asphaltic rocks (shale oil); 8 per cent Albanian petroleum (which seems to be counted as Italian); 2.4 per cent Italian petroleum; 2.3 per cent producer gas; 0.95 per cent natural gas and 9 per cent ethyl alcohol. It is hoped that in 1940 these various sources, together with Italian lignite deposits, will furnish the following proportions of the national requirements: Shale oil, 14.3 per cent; lignite, 26.4 per cent; Albanian petroleum wells, 34.3 per cent; Italian petroleum wells, 2.4 per cent; gas producers, 1.4 per cent; natural gas wells, 1.4 per cent, and ethyl alcohol sources, 17 per cent.

The show was to a large extent of an educational and a propagandistic nature, the exhibits including charts and posters dealing with the subject in hand. According to these, the present Italian petroleum policy involves the following points:

1. Development of searches for petroleum within the kingdom and the empire, and development of industrial and commercial activities in connection therewith at home as well as abroad.
2. Development of commercial motor transportation ("autotraction") by means of generator gas.
3. Development of commercial motor transportation by means of natural gas.
4. Development of the production of alcohol from cereals, grapes and above all from beets.
5. Development of the production of oils from shale.
6. The most efficient use of imported and national petroleum products, as well as of shale oils and lignite distillates.

Lubricating Oil Viscosity Increased

ACCORDING to researches made in the Soviet Union and described in a Soviet chemical publication by G. M. Pantchenkov and K. V. Pauzitski, the viscosity of lubricating oils as used for broaches, machines and cylinders, can be increased by means of short waves of wave lengths ranging from 7 to 18 meters. The effect produced is a maximum for a wave length of 7 meters. It is, moreover, the greater the longer the oil is exposed to the field of force, the higher the molecular weight of the oil treated, and the shorter the length of the wave. The increase in the viscosity is greater under reduced pressure, the process going on simultaneously in the liquid and the gaseous phase. The change in viscosity is said to be due to a polymerization and isomerization of the hydrocarbons.

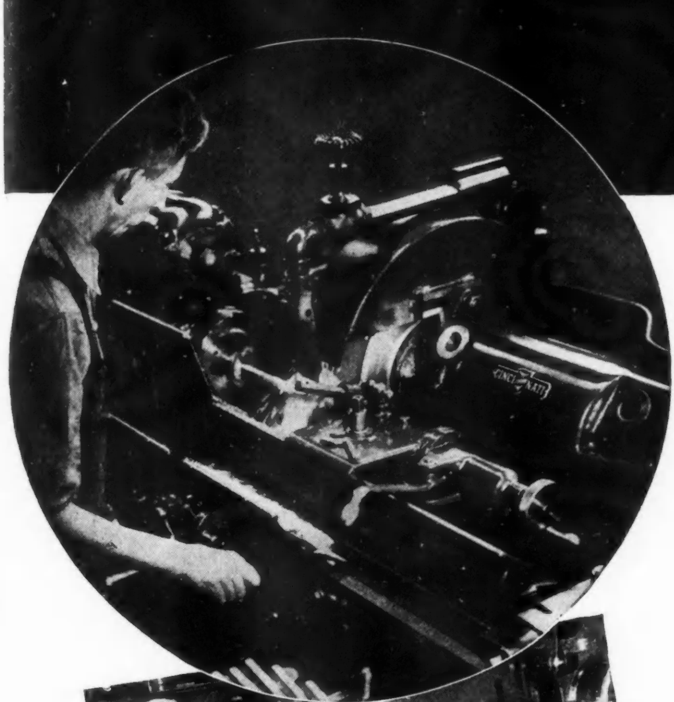
Rules for Design and Use of Carbide Tools

Cemented carbide tipped tools should always be kept in motion during grinding, according to L. J. St. Clair, Carboloy Co., Inc., who has set up a number of simple rules to be followed in the designing, brazing, and grinding of carbide tools.

Among these are: Wheel speeds should be approximately 5000 r.p.m.; the tip should never be dipped in water; the top rake should be ground first; only moderate pressure should be used; tools should always be ground against the cutting edge of the tool from tip to shank.

In designing tools, the tip should receive maximum support possible since carbides will not bend, but will break if the shank deflects. Carbon tetra-chloride is recommended as the best agent in brazing.

TEN WAYS SUNOCO IMPROVES *Grinding*

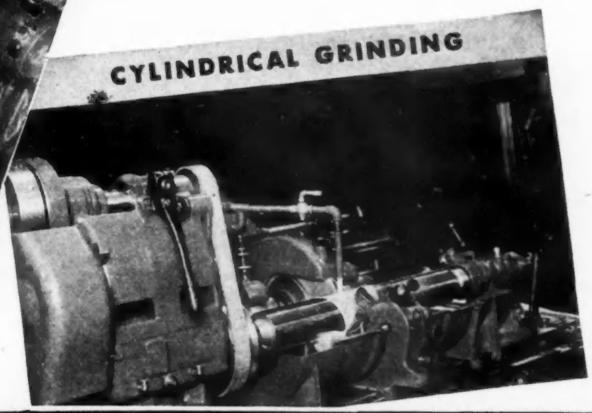


1. SUNOCO permits rapid stock removal per abrasive unit.
2. SUNOCO reduces the wheel cost per piece ground, because of fewer redressings required.
3. SUNOCO assures uniform abrasive action with clean cuts.
4. SUNOCO prevents distortion and maintains accuracy.
5. SUNOCO makes possible mirror finishes.
6. SUNOCO will not glaze the wheel or retard the tearing action of the abrasive wheel.
7. SUNOCO reduces the danger of burning the work.
8. SUNOCO is an excellent rust preventive.
9. SUNOCO is hygienic, it does not become rancid.
10. SUNOCO makes possible close limits of accuracy, smooth surfaces and fine finishes in the grind.

SUN OIL COMPANY
PHILADELPHIA, PA., U. S. A.
Subsidiary Companies: Sun Oil Co., Ltd., Montreal, Toronto • British Sun Oil Co., Ltd., London, England

VERTICAL GRINDING

GEAR GRINDING



CYLINDRICAL GRINDING

Grinding, Milling, Broaching, Boring, Drilling, Lathe Work—all are covered on a specific performance basis and profusely illustrated in the booklet "Cutting and Grinding Facts". Write for this free booklet—it contains a wealth of factual information that will be valuable to you for future reference.

SUNOCO
EMULSIFYING
CUTTING OIL

Bright Zinc-Plating in Barrels

THE Mazic process of bright zinc plating in barrels was developed by the Hanson-VanWinkle-Munning Co., Matawan, N. J. It practically eliminates the necessity for subsequent bright dipping. The solution recommended for use with Mazic is similar to the solutions generally used for barrel zinc plating, as follows:

Zinc cyanide—12 ounces per gallon of water.

Sodium cyanide—4 ounces per gallon of water.

Sodium hydroxide—8 ounces per gallon of water.

Mazic Brightener No. 3—3 lb. per 100 gallons of solution.

After all the salts are dissolved analysis will show the solution to consist of

Zinc, 6 to 7 ounces per gallon;

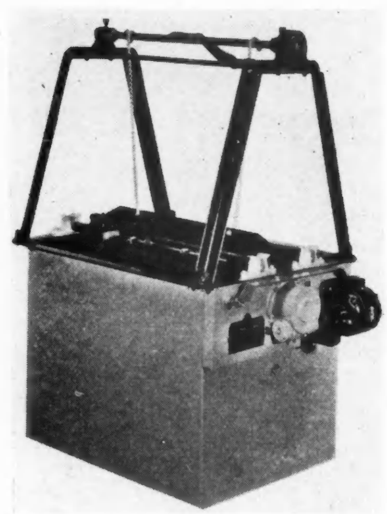
Total sodium cyanide, 14 ounces per gallon;

Sodium hydroxide, 8 ounces per gallon.

The ratio of the metal content to total sodium cyanide should be maintained at the proportion of 1 to 2½. Should the total sodium cyanide concentration decrease below this ratio, the brightness diminishes. The sodium-carbonate content should be kept below 10 to 12 ounces per gallon, or there will be a decrease of solution efficiency. As the formation of carbonate is accelerated at high temperature the solution should never be allowed to become warmer than 100 deg. Fahr.

The optimum amount of Mazic Brightener No. 3 is one-half ounce per gallon. When the plating solution is operating at its best, consumption of the brightener is very slow, about two ounces per hundred gallons per eight-hour day, but this varies, of course, according to local conditions. Brightener should be dissolved thoroughly in hot water before being added to the plating bath.

The solution can be readily analyzed by a method given in the booklet "Simple Method of Analyzing Plating Solution" for regular cyanide solutions, published by the Hanson-VanWinkle-Munning Co.



Mazic plating equipment

To deposit one ounce of zinc, 23.3 ampere-hours are needed. Apparatus must be supplied with current from a 10 to 12-volt source. At least 200 amperes should be drawn with the average-sized barrel. The best temperature for the operation of the Mazic barrel solution is around 85 deg. Fahr. The temperature rises during operation and when a bath is being operated continuously, provisions should be made for cooling. It is advisable and economical to circulate the solution, as the cost of cooling and circulating equipment will be saved in a few months' operation by the saving in the sodium cyanide required to maintain the bath at proper concentration.

Mazic anodes, which are recommended for this solution, are said not to sludge; they keep the solution clear and the deposits free from roughness and other imperfections. Anodes are not chemically attacked when the solution is not being used, and therefore do not need to be removed when the solution is idle; also, they do not polarize and consequently there is no polarizing film to remove. Ball anodes in spiral wire containers are recommended.

After the work is plated, the cylinder should be taken from the plating solution, and rinsed immediately and thoroughly in clean, cold water to avoid staining. After rinsing thoroughly in cold and hot water, the work is transferred to baskets, centrifuged and dried. If a tumbling operation in sawdust is called for, as in the case of small and light parts, only clean, heated hardwood sawdust should be used.

It is suggested that in plating to specification the load be made constant (approximately three-quarters of the weight or volume of the work considered a load in cadmium plating). The current should be raised to the maximum and the thickness checked for various plating times by the dropping test (Hull & Strausser).

As in all bright plating operations, the brightness of barrel plated zinc depends somewhat on the lustre of the surface being plated. A good grade of cold-rolled steel will give a better finish after being plated than, for example, pickled hot-rolled stock. Gray and malleable iron castings have always been difficult to plate in any cyanide solution. Freshly sandblasted or rolled castings requiring only a weak acid dip usually plate satisfactorily, but a prolonged stronger acid dip may be necessary to remove oxide and rust, and they would change the surface of the work so that zinc would not deposit, or would deposit only on some areas.

Impurities in any bright zinc plating solution have a highly detrimental effect. The material recommended for the barrels or cylinders is either Mercilite or hard rubber.

Light Measures

Attention is called by *Electrical Industries* of London to the anomalous facts that mechanical power is measured in terms of horse powers and electric illumination in terms of "candle powers." "The horse," it says, "has long been rationalized, and his nominal output has been settled at a figure.

"The candle is the nominal standard of reference for all commercial light measurements. Originally a unit of intensity only, the candle is now associated with the ubiquitous 4π constant in the definition of light flux. The candle, like the horse, is a source of energy, but rationalization of the candle, by defining its norminal output in ergs per second is not easy, because the factor of color enters into all luminous measurements. In other words, the ultimate character of all luminous phenomena is subjective, so that it is possible to have a light source of considerable energy output by radiation, which gives the subjective impression of low luminosity.

"Luminous intensity or light flux could be referred to a standard rate of energy radiation by a source of monochromatic light of defined wave length. As light standards are easily reproducible, there would be no practical advantage in doing this, but the anomaly of using as a nominal standard in electric lighting measurements a light source which electrical engineering has almost completely abolished is striking."

Announcing *Type D*

BARBER-COLMAN *Hydraulic* HOBBING MACHINE

Type D—the latest development in Barber-Colman Hobbing Machines—is setting new high records for production, and hob-life; new lows for operating and maintenance costs. No inspiration of a moment; Type D is the product of long experience in hobbing, careful study of machine tool progress, skillful use of hydraulic pressure for actuating machine members. No mere product of drawing board and laboratory, Type D won its place as a Barber-Colman product by notably successful performance in plant after plant where it was operated in actual commercial service. Each installation demonstrated again the ability of Type D to set new high records for production and economy on hobbing work up to 14″ diameter by 14″ face. Each demonstration brought orders for duplicate Type D Hobbing Machines.

NEW FEATURES AND ADVANTAGES

Hydraulic automatic operating cycle includes rapid traverses, feeds instantly adjustable to any desired rate within the capacity of the machine, automatic hob clearance.

Hydraulic vertical movement of work spindle, with micrometer adjustment; and automatic hydraulic clamping at five points.

Hydraulic hob-spindle drive, and improved mounting.

Hydraulic actuation of work-holding devices.

New operating speed, ease and convenience.

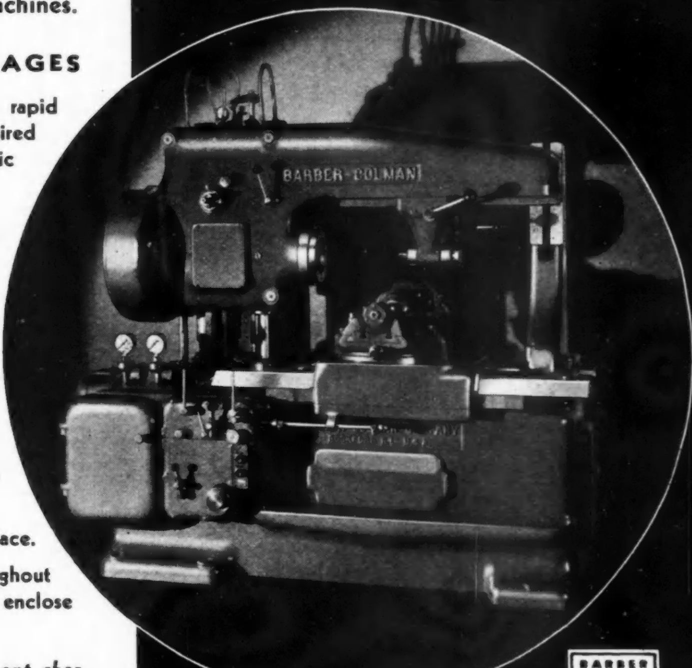
New simplicity of design resulting in new compactness, rigidity, strength, power, productive capacity and economy.

New hardened steel ways, finish ground in place.

New automatic pressure lubrication throughout extending even into the compartments which enclose change gears.

● ***Listed above are some of the more prominent characteristics of the Type D Hobbing Machine. Complete details supplied promptly on request; write for them today.***

The product featured in this advertisement is now available for distribution only in the United States of America.



BARBER B-C COLMAN

PRODUCTS

MILLING CUTTERS, HOBS, HOBBING MACHINES, HOB SHARPENING MACHINES, REAMERS, REAMER SHARPENING MACHINES, SPECIAL TOOLS

BARBER-COLMAN COMPANY

General Offices and Plant ROCKFORD, ILLINOIS, U. S. A.